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Original Articles

THE LACERATED CERVIX UTERI: AMPUTATION OR TRACHELORRHAPHY—WHICH?*

H. WELLINGTON YATES,
Detroit.

The significance of a cervical tear as a cause of uterine disease lies not in the existence of the rent itself, but solely in the symptoms which it produces and in the direct influence which can be traced to it as the prime factor in the production or maintenance of some pathological or functional derangement in the pelvic organs or elsewhere in the body. Not all lacerations of the uterus demand surgical interference; if they did, every parous woman would have to submit. Williams, in his excellent book just published, says "Slight tears must be regarded as an inevitable accompaniment of childbirth. Many of these heal spontaneously; others, larger perhaps, do not heal perfectly—as a result of infection or not sufficient time taken for convalescence, etc." The former class will not often solicit our attention, but the latter usually demand it. Now, what is the condition of a long-standing cervical tear, and what should be our attitude thereto? Probably a simple bilateral tear, not extensive in character, but with the greater part of the V-shaped injury full of dense scar and covered by granulation tissue; the cicatrix has choked off the venous circulation in part and if the case is a long-standing one we find not only a swollen œdematous cervix but a general metritis, a constriction of the mouths of the mucous glands and small retention cysts are the result. In the cases that have existed a long time, these cervices become hard and dense. The cicatricial tissue, not the laceration *per se,* is the source of trouble. Now, all of this is, in a way, a foreign body and one of lowered resistance. Therefore, we must remove every vestige of it, or degenerative changes may continue, and a malignancy may be the result. Granting that the latter, of course, is the exception, there are many other symptoms quite as trying to the patient's comfort as those of a more severe character. Through impingement upon nerve filaments which have a close relationship both to the cerebro-spinal and sympathetic systems, is it

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any wonder that old, long-standing, thick plugs of scar tissue are the common enemies of so many of our invalid mothers?

Now, it is clear to me that there are definite cases in which the old Emmet operation of trachelorraphy should be our choice, viz., those of recent injury where little scar tissue obtains, where the whole organ is properly involuted and, save for the bilateral or unilateral rent, a normal cervix presents itself. It is obviously unfair to this operation, however, when we apply it to a condition of great hypertrophy and hyperplasia; one where the whole or greater part of the cervix is composed of scar tissue, which is a tissue of lowered resistance, and one therefore prone to degenerative change. While the word "amputation" might perhaps better be substituted by that of excision or trachelorraphy, we will, for the sake of comparison to the operation of trachelorraphy, adhere to it. Just in a word, then, let me repeat that in the opinion of the writer, the Emmet operation is the one of choice *only* where little adventitious tissue exists and the pathological conditions are *both recent and simple.*

When the grosser lesions obtain, the more radical measure of amputation is called for. Emmet himself said in 1897 that "with but few exceptions amputation is the proper means to employ for relief of pathologic laceration of the cervix as it is now met with." When we consider the physiology and anatomy of the uterine cervix, we find it made up largely of circular muscular fibers, and that one of its chief normal functions is to dilate during labor. Now, if an injury of any extent takes place at parturition, and is allowed to remain until a considerable scar tissue forms, then the old operation of Emmet, if done properly, demands that all this old scar be removed, and with it it is quite unavoidable to take some of the healthy tissue; and since the majority of all these injuries are longitudinal, it is obvious that we should conserve the best interests of the patient by removing as little of these circular fibers as possible, for subsequent labors demand the same and more dilatation than the former ones did, and the more we cut off these ends, the more frequently will we have delayed labors, instrumental deliveries and subsequent tears. The more we constrict the outlet, the more we invite subsequent injury, and this is truly impossible to avoid in doing the Emmet operation where much foreign tissue obtains. Dudley, of New York, calls attention to the fact that much damage may be, and often is, done by narrowing the canal and obstructing the discharge and forcing it back into the tubes, thereby doing more harm than good. This accident is clearly overcome by amputation.

To H. P. Neuman, perhaps, belongs the credit of giving us the best technique for amputation. By the use of his knife and forceps here shown, the operation is done with neatness, accuracy and dispatch, and the manner in which the flaps are made and cut portions coapted *in their normal position* is, to say the least, scientific and surgical. No normal tissue need be sacrificed—no diseased tissue need be left. I can best detail the technique of Neuman's operation by quoting more or less directly from his article on Tracheloplasty in the Journal of A. M. A. for April 21st, 1901, and illustrate his meaning by some diagrams of my own here presented.

The patient being surgically prepared, is placed in the lithotomy position and the cervix drawn down with a vulsellum forceps, bringing the uterus well into view. The cervix is dilated and the uterus curet-

FIG. I

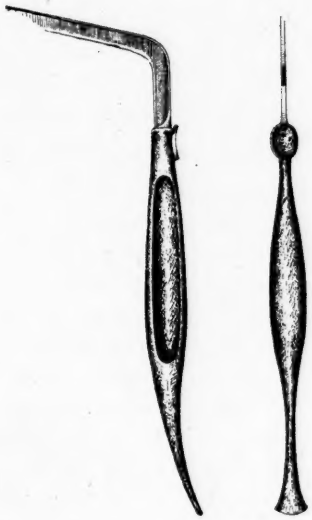

FIG. II

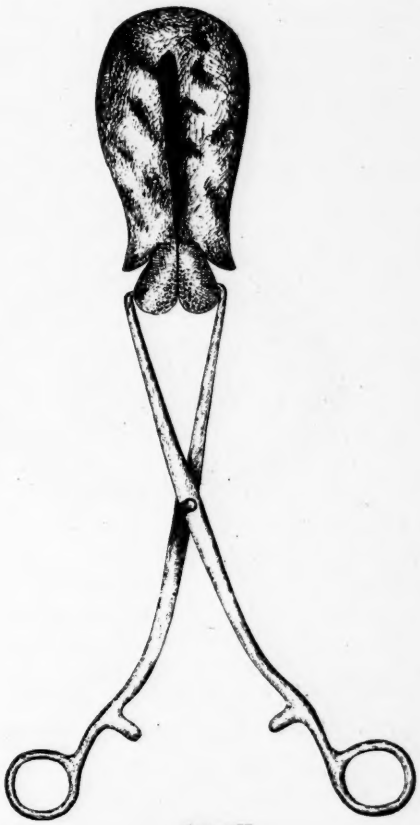

FIG. III

ted. The vulsellum still holding the uterus in a firm position, a double tenaculem (Fig. 1) whose blades pass one another and remain locked, is so placed within the cervix that their points are directed laterally from within outward. By the use of this instrument traction is made on the inner area of the cervix, leaving the anterior and posterior walls free for making the flaps. The cervix is now transfixed by the special knife here shown (Fig. 2) (Barrett's modification of Neuman's) and a clean cut made from above downward first in the posterior lip. The anterior lip is transfixed in a similar manner about 1 or 1½ centimeters in front of the other and cut in the same way. The forceps is now unlocked and removed from its hold on the inner surface and is made to grasp the plug of diseased tissue, as seen in Fig. 3. The partially severed portion is now cut off with the curved scissors, cutting

FIG. IV

from left to right. Viewing the uterus from side to side it will present much the same look as Fig. 4. The flaps thus made will now fall together and inward so as to

assume the appearance of a normal cervix. The amputated end would appear as Fig. 5.

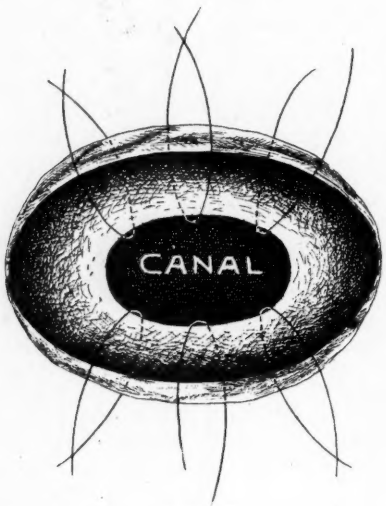

FIG. V

The sutures of silk worm gut are now placed in the flaps and the margin of the canal, three in the anterior and three in the posterior, and tied as shown in Fig. 6. The open spaces at the sides are closed by two sutures. A single strand is left as coming from each knot, thus facilitating in their removal. (See Fig. 7.) I have done this operation several times since last May, and feel that Dr. Neuman has given us some good technique which has come to stay.

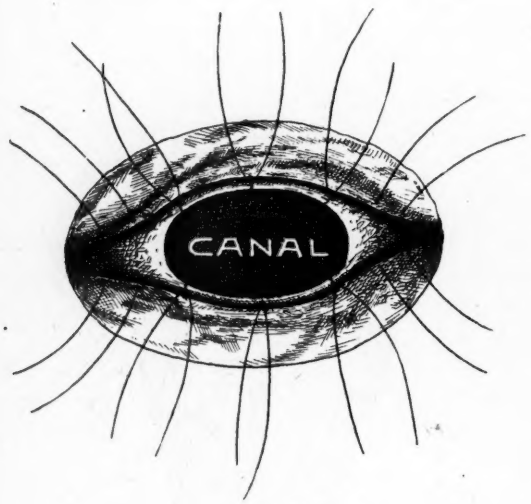

FIG. VI

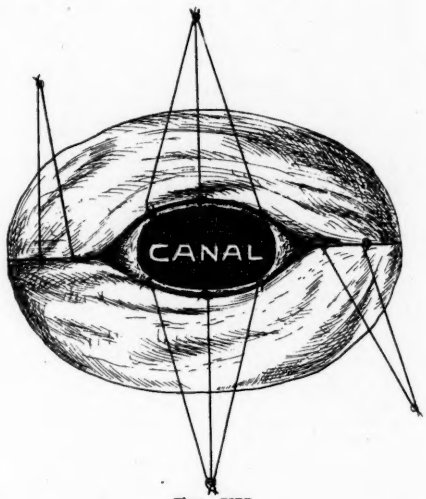

FIG. VII

One of the principal things about the operation, it seems to me, is to make a perfect transfixion, inserting the knife boldly through the entire cervix and thus avoid making a thin flap. The operation is easily done. It is quickly done, and when done properly all adventitious tissue is removed and the uterus is left in as nearly normal condition as is possible.

DISCUSSION.

Reuben Peterson, Ann Arbor: These operations for lacerations of the cervix are so common in gynecological practice that perhaps we do not give them the consideration we should. Of course very few cases present themselves during the course of a year where the cervix alone has to be repaired. Cervical lacerations are associated with other diseases of the uterus and adnexa so that the cervix operation simply becomes a part of a series of operations performed at the same sitting.

Now I have given most of the methods of amputation of the cervix an extended trial. I have also employed Emmet's operation in a good many cases, and I must say that in the majority of cases I find that Emmet's operation answers all purposes. It is an easy operation. The scar tissue can be removed by a simple scalpel and the parts can be brought together and healing almost invariably results. If the operator is careful to leave enough in the center so that the os is not closed entirely,

the results the doctor speaks of do not accrue. I prefer an Emmet operation to an amputation. I think in the majority of cases it answers the purpose best. Sometimes we get an extensive laceration where it becomes necessary to amputate, but the flaps do not in my experience come together as well as with the other operation. I think that the concensus of opinion is that the Emmet operation, which has been with us so long and has been given such a thorough trial, is the best.

Although I do not know that the doctor brought this out in his paper, it seems to me that the indications for operation for laceration of the cervix are pretty well defined at the present time. We do not operate now for so-called reflex symptoms arising from the cervix alone. We have found as we have studied this question more and more that these reflex symptoms arise from other pelvic diseases as well. We examine carefully the entire genital tract and do not rest satisfied with merely repairing a laceration of the cervix.

Mortimer Willson, Port Huron: There are undoubtedly a great many cases that we meet with in which the Emmet operation is the operation to perform. In those cases where there is scar tissue and where it is evident that the cervix is not elongated, the Emmet operation is the ideal one, and usually suffices. But there are a number of other cases where we have laceration accompanied by prolapsus with elongation of the cervix. In these cases, we oftentimes find the cervix so elongated that it protrudes from the vulva, with a very severe laceration. To use the Emmet operation in such a case, I think is not advisable at all. We must distinguish. For the last fifteen years I have been in the habit of amputating all elongated cervices, where it was evident that there was an elongation of the cervical canal and a hypertrophy of the tissue surrounding it. I have always had much better results than I had before, when I simply repaired the laceration. So we must distinguish between our cases. I have never had any difficulty in using the ordinary instruments. Possibly those the doctor mentioned would be an aid; I have not tried them, but with the ordinary scalpel and the forceps, taking hold on the inside of the cervix and making a flap above and below, and with the scissors cutting off the harder tissue in the center, it is a simple and easy operation, which can be performed by the use of the ordinary instruments.

B. R. Hoyt, Detroit: This operation, if necessary, can be done under cocaine, where the laceration is slight, with little or no pain to the patient. In a certain number of cases, I believe, curettement does more good than the repairment of a slight laceration in the cervix.

G. Van Amber Brown, Detroit: From what I have seen of operations upon the cervix, I am forced to believe, that, in extensive lacerations, this operation, done as advocated by Dr. Yates, is probably the best. However, as to its being so easily and quickly done, in the hands of everyone, this is not true. I have seen Dr. Newman do the operation in a very few moments; while with others I have seen them work from one half of an hour to an hour or more in endeavoring to follow Dr. Newman in repair of the cervix. I believe that no physician does a patient justice in keeping them under an anesthetic so long a time, for such a simple operation. Therefore, I cannot endorse the doctor in saying, it is one every man should do. I believe, that, while the operation is in itself a simple one, yet to know when these operations are indicated and what other work should be done in connection, is not so simple. As Dr. Peterson said, it is very seldom that the cervix needs to be cared for alone. If there is a lacerated perineum, it needs to be repaired. The uterus may be retroverted, there may be adhesions, etc. If so, these also need to be cared for. So it is most important to know, what work is indicated along with the repair of the cervix, that makes it not so simple. I believe it is an operation, which should not be done by everyone.

J. G. Lynds, Ann Arbor: I wish to say that I think there is a class of cases that amputation of the cervix is applicable to and as differing from those in which Emmet's operation for repair of the cervix should be performed.

I have advocated for a good many years, that confinement cases should be examined some little time after confinement, three of four weeks, to determine whether there be a laceration of the cervix. If a laceration of the cervix is found at that time, before any serious pathological changes have taken place, the Emmet operation, simply bringing the surfaces together, is certainly the operation which should be done, because you restore the cervix to practically its normal condition and leave very little cicatricial tissue. If that is accomplished then, of course the more grave changes of cystic degeneration and cicatricial contraction

and infiltration of the tissues, do not take place. Thus you would have fewer cases that demand an amputation. But where the cervix has become infiltrated and cystic throughout, certainly the Emmet operation for repair of the cervix is not going to overcome the difficulty. You must get rid of the diseased tissue. Where these changes have taken place, you may have more to do than to amputate the cervix; but if the cases were examined a short time after confinement and the lacerations repaired at that time, you would save a great many of those more grave complications, as disease of the tubes and ovaries, which occur often, because the cervix has been lacerated and this purulent condition has been kept up. If you can repair the cervix and leave it healthy, I believe it is proper to do so; but where the mucous membrane or the diseased tissue is infiltrated, I do not think you can do it by the Emmet operation. It is necessary then to remove more tissue. An amputation of the cervix differs in different cases; sometimes it is necessary to remove the whole cervix; sometimes, only a very small portion of it. By the operation which has been described, it is not really an amputation of the entire cervix, but an amputation of the end of the cervix, rather a superficial amputation. You will have a fairly good cervix after you are through with the amputation. If you were to examine a case six months after it had been operated upon, you would scarcely know it had been operated upon, as it is quite normal.

H. Wellington Yates, Detroit: Dr. Peterson's remark in regard to the difficulty in making the flaps fall in upon themselves, or rather that there seems to be any necessity for tension upon the sutures, is not manifest in this kind of an excision. The flaps instead of needing any tension need nothing but merely holding them in apposition, because while this, as shown here, is a deep sulcus, the ends of the flaps and canal are really together as they lie before you. (Referring to the chart which the doctor used). You have here only a sulcus. The flap is strictly a flap, and I believe Dr. Newman in giving us this operation has given us a most surgical thing. It is entirely different from a circular amputation. In a circular amputation you do have a necessity for tension, and it is absolutely normal.

With Dr. Lynds I believe that it is just these cases exactly, of old and long standing difficulties, that require the operation I have described. There is no question but what there are many cases where Emmet's operation is the one of choice. But in long standing cases, where the cervix uteri is dense or where retention systs are found, or in those cases where we have prolapsus or retroversion, these can best be treated by the operation I have described.

THE WORTH, NECESSITY, AND DUTY OF MEDICAL ORGANIZATIONS.*

J. M. ELLIOTT,
Hickory Corners.

When we stop to consider for a moment the number of doctors in our county and how comparatively few of them are connected with the Barry County Medical Society, it must be apparent to all that there are many who have not as yet acquired what Leartus Connor, of Detroit, styles the society habit. This habit, once formed, makes a man look forward to the meetings of his society with pleasant anticipation, when for a short time, at least, he is able to lay aside the grinding toil and carking care of a general practice. The society habit ought to be formed by every young physician before professional ethics are acquired; before quarrels, strife, jealousy, and enmity have so taken possession of his mind that he is unable to form a just estimate of his relation to his fellow practitioners and his life is filled with bitterness where there should be joy and the good feeling of comradeship.

Who can estimate the benefits to the profession and to the people at large if all

*Read before the Barry County Medical Society, Dec. 3, 1903.

the legally qualified practitioners of medicine were once united and thoroughly organized? As it is now, with only a minority connected with the Medical Society, this influence for good is largely nullified by the inertia or open opposition of those remaining outside of the organization. If all were united, much of the jealousy and bitterness would fade away because the incentive which keeps enmity and strife alive would cease to exist.

It has been urged that all are not worthy of our respect, friendship and help. Would not membership in the medical society be an incentive to honesty and honorable dealing? Admitting that now and then there is an incapable, why leave him free to pursue his own way? Why not have him where discipline could be administered as it is needed? Would not the inefficient and objectionable members of the profession rapidly diminish in numbers if they had to encounter the opposition of a united profession?

Men often complain that they do not get an adequate return for the time spent in attending the meetings of the medical society. Of such we may well ask, whose fault is it that the meetings are not more profitable and interesting? What have you done to build up the society and increase its usefulness? Why should you not always be present, not only to learn, but also to teach? Where would medical science be to-day if every member of the profession had considered only his own interest and convenience? There is no man in the practice of medicine to-day, no matter how valuable his observations and deductions are, who has not received more from those who have gone before than he can possibly repay. With the Master let us say, "Freely ye have received, freely give."

In a country like ours there is no paternalism. The government does nothing for its citizens and professions, but leaves them free to manage their own affairs. This is as it should be. This is as we would have it. So, while at first thought when we see other countries fostering and protecting the profession, we may think their system is preferable to ours, a more mature consideration of the subject will convince us that ours is the better way.

Perhaps we can scarcely hope to control all of the evils of proprietary medicines, but could not something be done? Should men be permitted to exploit medicines in common use as some wonderful discovery? Should unprincipled men be permitted to use the mails and the advertising columns of the current newspapers to frighten the unfortunately afflicted for the purpose of extortion? Should we not demand a law prohibiting the sale of any proprietary medicine containing alcohol, strychnine, morphine, cocaine, chloral hydrate or any other drug to which the user is liable to become addicted, unless the fact of its containing such poison is plainly stated on the label?

In the profession of law, when a member of the fraternity commits a crime or betrays his trust, his associates proceed to disbar him and deprive him of the privilege of practicing his calling. Should not the medical profession have the same duty to perform? When a physician becomes grossly immoral, a confirmed alcoholic, or addicted to the habitual use of narcotics; or when he has been convicted of criminal abortion, should not the County Medical Society have a duty to perform and demand that he shall no longer continue to endanger the lives of members of the community, no longer be permitted to disgrace the profession? Does any one

contend that the lawyer's duty to his client requires more honor than the physician's duty to his patient? Are dollars more valuable than the citizen? Is not the relation of the physician to his clientele as sacred as any other calling can possibly be, and ought it not to be as jealously guarded?

If we had a thorough organization, with all the members of the profession of the county belonging to the Society, a well-equipped bacteriological laboratory with suitable apparatus, which might be owned by the Society and given into the charge of some member who was qualified to make examinations of blood, excreta, neoplasms, etc., at a trifling cost, to the great advantage of the individual members.

But I will not trespass upon your time to point out other and obvious advantages to be secured. Suffice it to say that to secure the proper position for the profession requires its unification, and unification can only be brought about by an efficient organization. It has been well said that the man who, being legally admitted to the practice of medicine, does not unite with the local society places himself in the same relation to the medical profession that a bushwhacker does to the army. That man who manifests no interest in his profession will be very apt to forget the proprieties to be observed toward the individual physician with whom he may come in contact. I would have every man who graduates and takes up the practice of medicine join his county medical society, to continue his education, to teach him the ethics of the profession. And if he failed in his duty, and would not walk in the way he should go, then he might be taught that "the way of the transgressor is hard."

INTRATRACHEAL INJECTIONS: EXPERIMENTAL AND CLINICAL STUDY OF THEIR VALUE IN DISEASES OF THE LUNGS.*

WILLIS S. ANDERSON,
Detroit.

The tendency of modern medicine is to treat diseases locally, as far as possible, and to depend less on medication by the stomach to affect remote organs. We do not know what chemical changes drugs undergo in their passage through the gastro-intestinal tract and liver before entering the blood. Drugs which have been found useful in certain diseases are not well tolerated by the stomach, and it is a common experience to have patients complain of anorexia and gastric distress due to medication.

In the treatment of chronic pulmonary diseases, it is more rational to treat the lungs locally than to depend so largely upon gastric medication. The stomach is then allowed to fulfil its function of digestion, and drugs are given by this organ only to correct special symptoms, which cannot be readily relieved by local means. The use of inhalations and nebulæ in bronchial and pulmonary affections has been discontinued by the writer, because they did not seem to produce, as a rule, more

*Read before the Wayne County Medical Society, Feb. 4, 1904.

than temporary relief. The very small amount of medication carried into the air passages by nebulæ is not sufficient to do permanent good, and the stomach must still bear the brunt of medication.

There is now plenty of experimental and clinical evidence to show that a considerable quantity of liquid may be injected through the larynx into the trachea and bronchi without causing marked irritation or inconvenience; and that drugs so introduced are readily absorbed into the pulmonary tissues and general circulation. The writer has used for a number of years intratracheal injections in the treatment of bronchial and pulmonary affections with marked success. Experiments have been conducted upon animals by the writer, at the Detroit Clinical Laboratory, in order to prove the absorbability of drugs by the bronchial mucous membrane, and to demonstrate that their use is free from danger.

In considering the subject of intratracheal injections the following questions arise:

1. Are substances readily absorbed by the mucous membrane of the respiratory tract?

2. Are such substances irritating or dangerous?

3. Is it practicable to introduce drugs dissolved in liquids through the natural passages into the trachea and bronchi?

4. Do the clinical results warrant the use of this method?

The histologic structure of the lining membrane of the bronchi and air cells is favorable to rapid absorption. The fine capillary network of vessels covered only by a single layer of ciliated, cylindrical cells in the smaller bronchi, and flat polygonal cells in the pulmonary vesicles, offers little obstruction to free absorption. The immense extent of mucous membrane gives a large surface from which absorption may take place. The pump-like action of the thoracic walls with each inspiration tends to diffuse any gases, vapors or liquids which may be in the bronchi or air cells, and in this way favors absorption.

The rapid absorption of gases and vapors such as oxygen, chloroform, and ammonia is too well known to require more than mere mention. It is not so generally recognized that liquids may be absorbed from the bronchi and air cells in considerable quantities without injury to the lungs or inconvenience to the subject. The truth of this statement is shown by a number of experiments.

A fair-sized dog was chloroformed and a tracheotomy was done. Two drams of olive oil containing metheline blue were injected into the trachea. No dyspnœa or interference with respiration followed. The tracheal wound was then closed. The next day the wound was reopened and three drams of oil and metheline blue were injected. No dyspnœa or suffocation was apparent. Two hours later the dog was killed. Metheline blue was found on the surface of the pulmonary pleura, in the bronchial glands, in the parenchyma of the lungs and exuding from the smaller bronchi. There was hardly a trace in the trachea. The kidneys were stained by the metheline blue and the urine showed marked coloration. On another dog two drams of one-half of one per cent solution of iodine, in olive oil, were introduced through an opening into the trachea. A few moments later another dram was introduced. Forty minutes from the first injection iodine was detected in the saliva and urine. As the trachea was plugged above the opening none of the iodine solu-

tion could have escaped upward; and the only surface for absorption was from the bronchi and pulmonary cells. It is probable that the iodine could have been detected in the secretions much earlier had tests been made. A tracheotomy was made on a medium-sized dog and the trachea was plugged above the opening. Atropine, grain one-fiftieth, in olive oil was injected into the trachea. The pupils were closely watched. Two minutes after the injection the pupils commenced to dilate, and in six to seven minutes were widely dilated. In the same manner, on another dog, digitalin, grain 1/33 was injected. The heart action increased within five minutes.

A series of experiments were conducted to prove the relative irritability of various liquids introduced into the trachea, through the natural passages. Dogs were selected for the experiments. The animal was held by assistants in an upright position; the tongue drawn out and held by a towel, and a properly curved canula attached to a syringe was introduced into the larynx, below the cords. In moderate sized dogs one can readily see the epiglottis, and can guide the instrument past the epiglottis into the larynx. In large dogs the epiglottis is so far down that this may be difficult.

Warm physiologic salt solution was injected into the trachea of a dog in two twelve c. c. doses (about 3.5 drams in each dose). Slight cough and exaggerated respiration for two minutes, then no evidence of any abnormal condition was noticed, and a few minutes later a stethoscopic examination gave quiet breathing with no evidence of fluid in the bronchi. In another dog twelve c. c. of pure glycerine (Price) was injected into the trachea. There was considerable coughing and irritation, with some dyspnœa. A few minutes later a stethoscopic examination revealed fluid in the bronchi, as shown by the gurgling sound. There was also loud, blowing respiration and labored breathing. This coughing and irritation continued for several hours. The irritation caused by the glycerine is what our knowledge of its effect on other mucous surfaces would lead us to expect. The irritation is undoubtedly due to its well known affinity for water. In a similar manner, a twelve c. c. dose of white petroleum oil was given to a dog without causing any appreciable irritation, and, at another time, two twelve c. c. doses of normal horse serum caused no irritation. Olive oil is free from any irritating effects, as is shown by a number if injections in animals and its clinical use in patients.

The above experiments prove the ready absorbability of drugs injected into the trachea. The experiments of Colin, which will be referred to later, prove that water is readily absorbed by the mucous surfaces of the respiratory tract in considerable quantities without injury. This would also apply to serums. The absorbability of oil is not easily proven, but a number of facts indicate that it is taken up by the mucous membrane easily. The digestibility of oils and fats is in proportion to their melting point. Those with a low melting point, such as butter and olive oil are more easily digested than those of a high melting point, such as beef and mutton fat. The same rule holds good in absorption of oil through the skin, cellular tissue and mucous membrane. We are familiar with the absorption of fat by inunction through the skin. Winternitz proved that fat is assimilated in quantities of two to three grammes daily when injected under the skin. Hutchinson cites

instances where olive oil has been used successfully by subcutaneous injection to improve nutrition. If the skin and cellular tissues are capable of absorbing oil it would seem that the thin, delicate mucous membrane, richly supplied with capillary and lymph vessels, could also absorb the oil.

Experiments confirm this view. After a considerable quantity of oil has been injected into animals, and little or none regurgitated, an examination a few hours afterward does not reveal free oil in the bronchi. In the experiment where metheline blue and olive oil were used, microscopic sections showed oil in the parenchyma of the lungs and in the bronchial glands. The difficulty of fixing oil in the tissues makes one guarded about making a positive statement from this experiment. In order to study the effect of oils of different melting points a tracheotomy was made on a dog, and 2.5 drams of oil of theobroma, whose melting point varies from 86° to 95° F., was introduced into the trachea. The oil was heated to a little above the melting point, and a red coloring matter, Soudan III., was dissolved in it before the injection was made. The oil of theobroma was not as well tolerated as the olive oil. Four hours afterward the dog was killed, the lungs removed and placed in the refrigerator. Portions of the lungs were deeply stained by the Soudan III. Sections under the microscope showed the oil in the bronchioles and alveoli, but none in the parenchyma of the lungs. No oil was found in the blood. Comparing the result with the experiments with olive oil it would seem that the heavier oils were not so readily absorbed.

Since these experiments were made I have found some literature bearing upon this subject. Colin cites some interesting experiments upon animals. He quotes Goodwin, who found that two ounces of water injected into the trachea of a dog were promptly absorbed. The veterinary students of Lyons found that they could pour forty liters of tepid water into the trachea of a horse before causing death by suffocation. Colin, by an experiment, showed that six liters of water, poured into the trachea of a horse, within an hour were promptly absorbed. This was proved by a post-mortem examination made about three hours later. Weak alcohol, oil of turpentine, ether and other liquids were found to be promptly absorbed and to give symptoms characteristic of the drug employed. Colin injected into the trachea of a horse twelve grammes of an alcoholic solution of nux vomica in solution in two hundred grammes of water. In less than six minutes the animal fell, and he died ten minutes after the injection. Section of the vagus nerve was found to lessen the rapidity of absorption. The same author injected cyanide of iron and potassium into the trachea of a horse and obtained the drug from the jugular vein a few minutes later. These and other experiments show uniformly the same rapid absorbability of the respiratory mucous membrane.

The clinical use of intratracheal injections is perfectly feasible, and thousands of injections have been given without injury, and, in a large majority of cases, with distinct benefit. Two methods of giving the injections have been practiced by the writer. The first is by the use of the laryngoscopic mirror as a guide, in the same manner as when making an application to the larynx. The injection is made during an inspiration. In some patients it is easier to make the injection while the larynx is passive, as a deep in-

spiration seems to increase the liability to coughing or gagging. The second method is the direct one. The patient is seated with the face toward the window and the head raised. The tongue is held by the operator. If the tip of the epiglottis can be seen it is easy to introduce the canula into the larynx. In those cases where the epiglottis cannot be seen it is much more difficult. Either method can be acquired by a little practice, and as one becomes experienced in giving the injections less irritation will result. In a few cases where the larynx is small and the glottic opening narrow some difficulty may be experienced, and also in those where the mucous membrane is hypersensitive. Experience in the use of the injections will insure success in almost all of the cases.

The best vehicle for the injections is olive oil. This opinion is based both upon clinical and experimental evidence. Dr. Colin Campbell, of England, uses Price's glycerine as a vehicle. Glycerine is irritating to all mucous membrane. My experiments upon animals, and a limited experience with its use upon patients convinces me that it is not the vehicle to use unless for some special reason, as, for instance, its solvent power. The objections urged to olive oil are that it is not absorbed, that it coats the mucous membrane and prevents the absorption of oxygen, are not borne out by my experiments on animals, nor by a large clinical experience on patients. The advantages are, that it is a solvent for most of the drugs which one would naturally use; such as the essential oils, iodine, iodoform, guaiacol, menthol, and many others; that the drugs dissolved in oils become less irritating than when water is used; and that absorption of the oil adds so much nutriment to the body.

Intratracheal injections have a wide range of usefulness in diseases of the lungs and bronchi. Their action is both local and systemic. By their local action cough and irritation are quickly relieved. In spasmodic asthma the dysponœa and whistling rales are lessened within a few minutes, and breathing becomes free and easy. This action is so quick that it is evidently due to the local action on the nerve terminals. Expectoration is facilitated by the action of the oil. In many cases the amount of expectoration is increased for the first few treatments, then a noticeable diminution follows. The relief of the dysponœa is often immediate, due to the local action of the injection. The sensations following the injections vary with the condition of the lungs, and the sensibility of the patient and the drugs employed. The patients usually described a slight smarting, burning or cooling sensation. This seldom lasts more than one minute, and is never severe. As a rule, the local sensation is in proportion to the congestion of the parts, and decreases as the condition improves. The patient usually feels the effect more in the portions of the lungs affected. The injection is influenced by gravity as well as the suction force during an inspiration. The influence of gravity can be utilized in directing the injection into one or other of the bronchi, by inclining the patient's body laterally. Dr. Colin Campbell has devised a mechanical chair, which enables him to incline, quickly and easily, a patient at any desired angle. Patients often smell or taste the drugs in the expired air many hours after the injection. As long as any of the injection remains in the bronchi or pulmonary vesicles the air will contain the drugs; thus we have the effect of inhalation prolonged over a much longer

period than when used in the usual manner.

The selection of drugs to be used is important. They must be non-irritating, freely soluble in the vehicle, and not used in poisonous doses. The writer has found that such drugs as guaiacol, camphor, menthol, iodoform, iodine and some of the essential oils are most useful. Sedatives may also be used. Some of the essential oils are germicidal in their action, as oil of thyme and eucalyptus. Dr. Mendel uses these with oil of cinnamon and wintergreen in five per cent solution in olive oil. He calls attention to the value of oil of wintergreen in cases accompanied by fever, and states that the temperature is lowered and night sweats lessened by its use. Most of the cases under the care of the writer have been given combinations of camphor, menthol, guaiacol and eucalyptus in varying proportions. Iodoform has been used in a few cases. Dr. Mendel states that iodoform is more soluble if used with the essential oils. The solution is filtered through cotton and sterilized before being used. The usual dose is from one to two drams. This may be repeated several times a day if necessary. For the simpler bronchial affections a treatment daily or every other day is sufficient. The solution should be warmed to body temperature before the injection is made. The antiseptic action of the injections lessens the liability to secondary infection and the complicating pneumonia so common in tubercular patients.

In conclusion, two illustrative cases will be given.

E. M., a girl, aged 14, caught cold in the autumn of 1902, and during the winter coughed considerably. She had thick, greenish expectoration sometimes streaked with blood, dyspnœa and general weakness. Her appetite was fair. She came under my care April 28th, 1903. She had night sweats for a few previous nights. Examination revealed temperature of 99.2°, a small rapid pulse, and evidences of anæmia. Physical examination of the chest showed dullness at the upper left, with bronchial breathing and a few moist rales at the end of inspiration. There was a slight increase of pitch at the upper right. This patient improved rapidly under daily intratracheal injections of guaiacol, camphor-menthol in olive oil. Careful attention was given to her diet and hygienic surroundings. The noticeable effect of the injections was the relief of the cough, the gradual lessening of the dysponœa, expectoration and temperature. She left the city for the summer and lived an out-of-doors life, taking plenty of exercise in the open air, observing strict rules as to diet and habits. She returned in the fall with no cough, nor dysponœa, and with a substantial gain in weight and strength. I had no opportunity of examining her lungs on her return.

W. S., male, aged 38, caught cold in the fall of 1902, from which he thought he had recovered. Early in the spring he commenced to cough, lose weight and strength, and in May was confined to his bed for nearly a week. At that time he developed a hoarseness which persisted until August, when he consulted the writer, complaining of hoarseness, cough with thick yellowish expectoration, fever, night sweats, poor nutrition, and general malaise. His temperature for the three days following the examination was in the morning, about 99°, and in the evening from 100 to 101.5°. The larynx showed evidence of beginning tubercular involvement. Physical examination of the lungs showed slight impairment of the resonance

at the upper right, with diminution of breath sounds, and increased vocal fremitis. Tubercle bacilli were found in the sputum. This patient's digestion was seriously impaired by the cod-liver oil and the drugs which he had been taking. All medication by the stomach was stopped, and he was given intratracheal injections daily. The diet was carefully regulated. Milk and raw eggs were given in large quantities. Later he was given a capsule containing iodide of ammonia, sulphate of cinchonidina and codein for a short time. Under treatment the cough, expectoration and temperature diminished. His nutrition and strength improved and his dysponœa was entirely relieved. Although his gain was very satisfactory, he was advised to spend the winter in the southwest. He is now doing well on a ranch in Arizona. There are two points of interest in this case. First, his gain in strength and improvement in appetite as soon as medication by the stomach was discontinued; second, the ease with which the pulmonary symptoms were controlled by intratracheal medication.

There is a class of patients who complain of pain or pressure in some portion of the lung, usually at the one or other apex, with every fresh cold. Physical examination does not always reveal any definite signs, except perhaps a consciousness on the part of the examiner that air does not enter that portion of the lung as freely as it ought. This may be termed a "lazy lung." This peculiar and annoying pain is quickly relieved by the injections.

The writer has given thousands of these injections during the past five years, and has never seen harm result. This method offers an exact means of local treatment, and as one becomes more familiar with its use better results follow.

The writer wishes to acknowledge his indebtedness for the assistance rendered by the staff of the laboratory, and especially to E. H. Hayward, who has assisted in all the experiments.

PROFESSIONAL COURTESY.*

P. S. ROOT.
Monroe, Mich.

Mr. President and Members of the Monroe County Medical Society:

I shall scarcely expect to present anything novel for your entertainment or consideration, for the reason that the salient principles of my theme have been written upon since the days of Hippocrates, and are therefore familiar to all. However, an oft-repeated truism is not likely to suffer loss in its logical sequences. I desire that my remarks shall not be construed as having in them anything of a personal nature, or of a distinctively local application, except where we feel that we merit some correction, some admonition, with the view of bringing out the best there is in us, and placing that best where it will inculcate sentiments whose growth and spread will redound to our own happiness and to the welfare of those with whom we associate.

I desire to call your attention to some thoughts upon the rather common subject of courtesy, with its practical bearing on

*Read before the Monroe County Medical Society, Jan. 21, 1904.

our professional conduct. With this object in view, we shall assume that we do not need for the guidance of the members of our brotherhood any other definition of the term than that broad, commonplace understanding which has been accepted by civilized men and nations almost from time immemorial. "Politeness, originating in kindness and exercised habitually" constitutes a code of ethics the rigid observance of which should be seen in every walk of life, in every business career and in all human intercourse. The mere formality, the smile of the deceiver, or the criticism of the cynic, can have no possible place even in this broad generalization. For here it is that one's personality must become the index of his inner self. I fancy there are none of us who would knowingly, and by preference, subscribe to any social edict which did not conform to this standard. The trouble is, we are apt to forget, or we fail to give to sometimes trivial matters that consideration which alone can keep us within the confines of honorable deportment. It has been well said that " it is human to err," and I dare say that many times we attempt to shield ourselves from responsibility by assuming this mantle of charity. To the aggrieved, toleration soon ceases to be a virtue, and sooner or later we find ourselves estimated at our true worth. The moral obligation demands that we should confess our errors and that we should strive to make restitution wherever and whenever possible. If this were done, or even a concerted effort made to accomplish such a result, we should see a medical profession united and irresistible in its influence for good.

Within the past two years a movement has been inaugurated by the profession of this country by which many of the undesirable factors, which have interfered with our social relations, are being eliminated and in their stead is being substituted a mutual desire for a general betterment of the whole. I do not need to tell you that this movement for our emancipation has made wonderful strides in this short time, but with equal candor I must beg you to remember that there is still much work to be done—many things which call for a renewal of our energies in order that we may attain greater results, and make more perfect that which has been so nobly begun. Take, for instance, our own county. There are in this county something over thirty physicians in good and regular standing, and yet there is scarcely one half of this number enrolled in our society. Why should this be so? I think it will be admitted that no man whose mental equipment is such as to entitle him to a "Medical Degree," can afford to ignore the benefits resulting from a membership in some good medical society. With such an incentive, coupled with our individual efforts, it would seem that we should have met with a greater degree of success. May it not be that our partial failure is the result of deficient courtesy? Have we not, perchance, forgotten that we are our brother's keeper? Or have we failed to make our meetings as attractive as they should have been? Perhaps we are not open to conviction upon any of these counts. However, the fact remains, and the evil is not remedied. If example is to be considered more potent than precept, let us make the demonstration so worthy of emulation that none can resist. It follows, therefore, if any of us have been remiss in our professional conduct we should make haste to correct our own faults that we may not serve as stumbling blocks to those who

should be affiliated with our society. In this connection you will agree with me that no society can hope to win respect—lasting respect— unless such a society can offer as an inducement things that are honorable and of good repute. The medical society is not the place where one may invest himself with the cloak of hypocrisy and at the same time hope to carry a convincing influence to those outside. Not to be seen of men, but rather to be admired for our good deeds, is an example the drawing power of which is difficult to estimate. Courtesy that springs from the heart will do much to put aside the idle bickerings and petty jealousies that to-day are all too common in our profession.

Politeness, and the mutual respect which it engenders, will make the settlement of questions involving the professional honor or moral rectitude of our members easy indeed. So, too, shall we be able to adjust the oft-times vexing question of fees. I think it must be taken for granted that there can be no inflexible schedule of prices for professional services, and yet by common consent we have come to regard certain regulations in the light of an unwritten law the infraction of which should be rarely called for. There is no question but that these regulations, as construed by the better class of physicians, are both just to the patient and honorable to the profession; becoming dishonorable only when we, in our mad scramble for gain, practice or preferment, throw courtesy to the winds. While it is a source of regret that the mercenary element must needs occupy so large a place in our dealings, still the fact remains that comparatively few physicians ever acquire even a moderate competency. To-day the doctor finds that increased expenditures are demanded if he would keep in touch with the perfected methods of scientific research; he finds, too, that the ordinary expenses of living are considerable, while he must barter his services for what they may happen to bring in a market all too sadly demoralized. It is but fair to state that the medical profession is largely, if not solely, at fault for the present condition of affairs, the reason for which is, that the estimated value of our services has been placed too low. Even as low as it is, we allow the public to discount it. We may assume with reasonable assurance that our patients will not place a higher money value upon our skill than we do ourselves; nor will they care to what degree of degradation we may choose to bring ourselves. Comment is, therefore, useless unless we have respect for our profession and respect for ourselves. If the laborer is worthy of his hire, if we respect the dignity of our calling, let our actions be such as will preserve that dignity, and at the same time place the proud distinction of "Doctor of Medicine" somewhat at least above that of the common laborer. More courtesy, with less cupidity and less selfishness, will greatly aid in bringing about this most desirable result. With its consummation we shall be the recipients of more confidence, more appreciation and a higher social status.

Living is not all of life. There are obligations and duties which we owe, each to the other, of more importance by far than the mere controlling of a large practice. Especially is this so if, to win that practice, you have lost your self respect. If the medical fraternity were animated by such a community of interests as would place the stamp of disapproval upon every questionable action, then indeed would

we be in a fair way to realize the ideal of what the medical profession might be. It is said that "all things come to him who waits;" and if so we may yet see the time when every honorable physician will receive a fair and legitimate compensation for his services. The great working field of charity, in which the general practitioner is always in evidence, is among the poverty-stricken poor. 'Tis here that we must expect little or no pay—many times not even gratitude for our work. Such devotion to duty, in the absence of any possible reward, is not to be found in any other profession. It does not follow, however, that indiscriminate giving is an ideal charity or that we should pauperize those who are able to pay an honorable fee. The principle of self-preservation demands of us that we make some provision for that time in our lives when we shall no longer be able to work. The proverbial "rainy day" is a factor not to be ignored. To the medical profession is given a degree of latitude in governing its members not usually found in other organizations, scientific or otherwise. We are not restricted by unions, walking delegates and the like, but we stand forth as men whose nobility of character is our most precious asset, to preserve which we should bend every honorable effort. Therefore, if the question of fees is of vital importance let us bring to its solution that loyalty of purpose and mutual respect which knows no failure.

In conclusion, permit me to say that so long as we are a trade body we must expect competition, but let it be an honorable competition, free from questionable motives, ex parte snap diagnoses, and from insidious inuendoes. The re-organization of the state and county medical societies has for its object the promotion of such a state of brotherly consideration as will make easy these reforms at which I have hinted. If the time is propitious and the opportunity ours, let us extend the glad hand of fellowship, prompted by professional courtesy.

"Therefore, all things whatsoever ye would that men should do to you, do ye even so to them."

RECENT PROGRESS IN LARYNGOLOGY.*

WADSWORTH WARREN,
Detroit.

In the progress of laryngology during the past two years, there has not occurred anything of epoch marking importance, although there have been many features which show decided improvement in instrumental technic and increasing familiarity with pathological processes and conditions. Increasing knowledge of this special line of medicine is apparent to every one. The small towns, as well as the large cities, are supplied with fairly competent laryngologists. Speaking in a general way, perhaps one of the most hopeful features in this line of work is the importance, which is coming to be placed upon general or systemic conditions as affecting local states in the nose and throat. A good outline of this can be had from the admirable work of Friedrich. His publication came out in the latter part of 1900, but it was read more freely during the past year.

*Read before the Detroit Academy of Medicine, Jan. 26, 1904.

There seems to be a certain proportion of the older laryngologists who are content to use the work already done and to be satisfied with it without further attempt at progress. Another considerable part supply a great deal to medical journals without adding materially to the sum total of laryngologic knowledge. A few keep on working ceaselessly, and to them we are indebted for certain features of our work, marking improvement and progress.

To my mind the most hopeful feature of the past year or so has not been so much the making of new instruments as a greater change in our method of operating and the after care of cases, which more nearly approximate the best known principles of general surgery. As an example of this, I might cite the well known Asch operation for deflection of the septum. Special instruments and splints are required for this and, under the use of Asch's technic, every form of deflection of the septum, quite regardless of the nature of the deformity, was treated alike and each subjected to this arbitrary method. At present, nearly every laryngologist of scientific attainment operates upon deflected septa very much according to the indications of the individual case. Scarcely any one nowadays attempts the Asch operation pure and simple.

With reference to the nose, an investigation undertaken by E. S. Talbot is worthy of notice. His statistics show that he has made an examination of 11,000 skulls, but on account of fragility of the septum, only 7,600 had enough of this portion remaining to give an idea of its shape. Five thousand six hundred and seventy-two of this number showed marked deformities. He is not of the opinion that traumatism is in any large measure responsible in the production of deflections. The theory that the deformity is primarily the result of traumatism, due to an injury in utero or at the time of delivery, or even later, will not account for such a large number of these. The theory of Trendelenburg, that these deformities are due to a crowding up of the high arched palate, is likewise not true, because an arched palate never occurs with the first set of teeth.

The results of the work of Watson, dental surgeon, along this line, given before the Laryngologic Section of the Wayne County Medical Society last March, furnish a good illustration of the relations existing between high arched palates and the permanent teeth, as influenced by mouth breathing, due to adenoids and enlarged faucial tonsils. The deflection of the septum must, further, depend upon the walls of the nose and the turbinates, which ossify before the septum. Hence the septum must adapt itself to the location of these bones.

Regarding the external deformities of the nose, the method of paraffin injections, first suggested by Gersuny, has been wisely used during the past two years. This method is applicable to a variety of cases. It has become a powerful adjunct to the knife in plastic operations. Various authors have modified the technic in different ways. Quinlan has an ingenious method for keeping the paraffin mixture warm, to prevent its setting too early. He uses an ordinary glass anti-toxin syringe with a needle of large calibre. This is incased in a metallic jacket, through which water runs at a temperature approximately 125° F. The hood or jacket is fed from a receptacle placed two feet above the operator, connected by a small rubber tube.

A good deal of attention has been paid to operations for the correction of deflec-

tion of the septum. Freer of Chicago has perfected a technic for the relief of this condition, somewhat similar to that of Fletcher Ingals. He uses small angular knives for cutting away redundant cartilage and dental spuds for separating the mucous membrane from the underlying cartilage and bone. Redundant cartilage is removed with the former and the bone with a trephine or small chisel. Roe of Rochester has been very successful in this line of work, although I am not aware that he has published anything of note during the past year. He has some very ingenious septum forceps for destroying resiliency of the cartilage. He removes redundant tissue and keeps the septum in place by splints until healing has occurred.

Regarding perforation of the septum, but little that is new has been adduced. In my opinion, the work of Zuckerkandl remains the most classical information we have on the subject.

Regarding the turbinated bodies, some new scissors for the removal of part of the lower turbinate, have been devised by Dunn of Erie, Penn., and are made by Meyrowitz. These scissors have very strong handles, while the blades are comparatively small, although strong, and have serrated edges. The same firm in their last bulletin, described a new nasal file, designed by Fetterolf of Philadelphia. The cutting portion of this instrument has a serrated border, cutting ½ on the pull and ½ on the push, while the sides of the cutting portion are milled like a file across the surface. On the whole, there is less tendency on the part of the laryngologist to remove any decided portion of the lower turbinated bodies, than was the case four years ago.

In regard to ozena, the etiology is still a much discussed point, with as yet little agreement between various investigators. Grünwald of Munich, not long since, presented his views on the subject, taking the ground that disease of one or more of the accessory cavities is the etiologic factor in ozena. The adherents of the microbe theory, as to the causation of this disease, have been as busy as usual, but have not afforded us any results upon which we could base successful treatment. Simple local and general measures, are considered to yield results which frequently amount to a practical cure. It is generally agreed that all the dry and putrescent secretions must be removed by some means or other before local applications can have any marked effect.

In the matter of therapeutics, suprarenal extract and its derivative, adrenalin chloride, are in general use and evidently have a definite position in rhinology. The limited application of super-heated air to the mucous surface in the upper respiratory tract, has recently received considerable attention and several observers report that it has a favorable action in some forms of rhinitis, asthma, otalgia, and other affections, depending upon vascular disturbances, rather than on conditions of chronic hyperplasia.

Regarding diseases of the accessory sinuses, there has been a growing tendency toward intranasal and more conservative methods of treatment. Reaching the maxillary sinus by a puncture beneath the border of the lower turbinate, probing the frontal sinus, after amputation of the anterior part of the middle turbinate, and reaching the sphenoidal sinus by probing the natural opening and enlarging this where necessary to secure drainage.

The subject of the pharyngeal tonsil has received the usual amount of attention, although I do not know that anything of

special interest has been developed along this line.

Regarding the tonsils, considerable work has been done with reference to the microorganisms which are likely to produce membranous exudates on the faucial tonsils. Massei groups these into three classes: 1st, Cocci-streptococcus, staphyllococcus, and Roux's coccus; 2nd, Bacilli-Klebs-Loeffler, colon and leptothrix; 3rd, fungi-oidium albicans. These are practically always mixed and the exudate is influenced, not so much by nature, as by the severity of the process. The importance of accurate local treatment in acute tonsilitis, is becoming better understood. Crypts, filled with exfoliated epitheleal cells, leucocytes, bacterial debris, and fibrin, should be evacuated and the surface of the crypt cleansed by means of a suitable antiseptic. Regarding instruments for the operation of tonsillotomy, the old reliable Mathieu tonsillotome is still in evidence, but a host of new appliances have been introduced and some of them are of important assistance. The triangular cutting punch, Casselberry's tenaculum forceps, and Robertson's scissors may be mentioned among the best of these innovations.

Regarding the larynx, operations for malignant disease seem to show a less gloomy outlook than in the past. The reports of Moure of Bordeaux and Glück of Berlin presented to the British Medical Association last summer are quite complete. Glück's results are remarkably good. Moure's article appeared in the journal of Laryngology of Dec., 1903. With most others, he agrees that medical treatment and most all endo-laryngeal operative interference is useless, where there is reason to suspect malignancy. He lays stress upon the removal of all infected glands in the neighborhood of the growth. He speaks with much commendation of the operation of thyrotomy after preliminary tracheotomy. Sir Felix Semon has also done a good deal to bring this operation into esteem. A long incision is made from the hyoid bone to the episternal notch, using great care to have the incision exactly in the middle line and dissection is made slowly layer by layer, then, when all hemorrhage has been controlled, the larynx and trachea laid bare. The tracheotomy is made just below the first or second tracheal ring. Operating in this way, the field is brought well into view, so that the operator is able to get at much more of the diseased tissue than in any other way. All observers remark upon the amount of vocal power some of these patients possess, even after removal of a considerable portion of the larynx.

Good work has been done during the past year in the study of hay fever. Dunbar of Hamburg, Germany, published a monograph detailing a long series of experiments, which he had made regarding the pollen of the gramineæ, as the cause of the early summer and spring hay fever of the continent. He was able to isolate from the pollen of the maize a toxine, which would cause, when placed in a weak solution on the conjunctiva of any hay fever patient, an acute typical paroxysmal attack. With this toxine, he produced an anti-toxine, which he used to some extent himself and which was used by Sir Felix Semon of London and by Emil Mayer of New York City. While the results of the use of this antitoxine were not brilliant, they seem to attain a certain success, and are to be given a further trial. Otto Scherer of this city, in a paper read before the Laryngologic Section of the Wayne County Medical Society Jan. 26, 1904,

gave in detail an account of some original work which he had done along this line. His experiments were conducted with a view of determining the cause of the autumnal type of hay fever found in this country. These have led him to consider the pollen of the rag weed (ambrosia artemisiafolia), as being the chief cause and factor in the production of the paroxysms of hay fever. His paper was not conclusive, as he himself stated, and was more in the nature of a preliminary report. He was able to isolate from this pollen an alkaloidal material, which he denominated ambrosine. By the local application to the conjunctiva and by subcutaneous injections, in exceedingly dilute solutions, he is able to bring on a paroxysmal attack of hay fever in hay fever patients at all seasons, but the same application in immunes has no effect whatever. Both of these investigators practically ignore the two other factors which have generally been supposed to have an important bearing upon these cases, viz: some constitutional condition, and a local pathological state in the respiratory tract.

EPILEPSY AS VIEWED FROM THE STANDPOINT OF A SUFFERER.

Inasmuch as it is so difficult to get the subjective symptoms of those afflicted with epilepsy, I submit the following letter, which is an unusually clear expression of the sensation of a sufferer during an attack. The communication is the result of conclusions arrived at on the part of a bright young man who has no medical training but who has had sanitarium treatment and free access to medical literature. It is pathetic in its earnestness.

Very truly yours,

J. E. CLARK.

Detroit.

DEAR DOCTOR—In my case the species of epilepsy is that known as false, wherein the patient is forewarned of an attack through an aura which lasts for about one minute before unconsciousness takes place. I am 26 years of age and have had attacks for 10 years—one attack the first, and gradually increasing to 20 the last year. Am physically and mentally sound, and always have been so; no vices nor bad habits; no injuries to body or head during youth, nor any diseases which left any noticeable evil effects; no hereditary weaknesses or deformities, a long-lived, hardy race on both sides of family. Weight 140 pounds. Height five feet ten inches.

The first attack happened at night during sleep and from no perceptible cause. In the course of three years thereafter I began to be troubled with heartburn, just below the æsophagus, and with flatulence. The stomach conditions gradually became worse as the attacks increased in number. Nevertheless, there would often be long periods when the stomach trouble would be inconsiderable and general health seemed to be excellent.

During youth I had sick headaches, usual in young people, but for ten years I have had none, though my stomach is often very foul. Have always been a good eater and always have a craving and insatiable appetite, notwithstanding the condition of my stomach.

GROWTH OF SYMPTOMS AND PROGRESS OF SENSATIONS LEADING UP TO AN ATTACK.

The first symptomatic feelings of a threatening attack (which may happen at any indefinite time beforehand) are momentary auras and a nervousness which is near akin to a continual excitement, having a contracting effect on the muscles.

Co-incident with the above symptoms, are heartburn from excessive secretion of gastric juice, eructations of gas in large quantities, violent peristaltic action, and palpitation of the heart.

There is no particular condition or time during which I may be taken with an attack—perhaps I've had the greatest number at or soon after meals.

During an aura which ends in a convulsion the sensation is that of great excitement, hands become numb and muscles in neck contract first, along with those in hands, though mind is clear even after having fallen, cannot see, and body is in a convulsive state. I have run nearly an eighth of a mile during an aura before an attack.

CONVULSIONS AND AFTER EFFECTS.

The convulsion lasts about one minute, when the muscles relax, and I sleep quietly for 15 minutes usually. My mind and head feel bad and dull for a day or so afterwards and then my normal brightness returns.

Following an attack for about 24 hours there are sympathetic auras occurring at irregular intervals which are overcome by releasing the gas and pressure from stomach. These sympathetic auras have the same sensations as those which end in an attack; though gas has been released from stomach before an attack with no effect. There is not usually much trouble from gas immediately before an attack.

A few times when I have had a rather light attack I would have another and harder one, though always within 12 hours.

Soon after the disapearance of sympathetic auras there is generally a few days of good feeling when the alimentary tract acts perfectly, foods all agree, and no trouble from nervousness is experienced.

MISCELLANEOUS FACTS AND QUESTIONS.

While eating a very heavy diet and when the food from one meal to another was literally forced through the stomach, I have gone the longest periods of time. A light diet always encourages nervousness and its contemporary troubles. There is often liberated from the stomach more gas than is possible to be secured from fermentation under the best of conditions, and when the stomach contains no food. The gas liberated is mostly CO_2.

The attacks seem to be the result of a gradually increasing violence of the peristaltic action ending in a convulsion, during which the muscles of the diaphragm are rigid in nature's struggle to force down or out of the stomach the irritating cause of the disease.

If the system can work perfectly for a few days after an attack, can there be any organic trouble of the nerves?

Why is it that a convulsion remedies the trouble for a short time and then it appears again?

Is not nature always laboring, even fiercely at times, to overcome our enemies, though always in her own way?

Does this irritating cause of the disease lie in and as a part of the system, or is it entirely separate?

If it were the former, would your patient be attacked at night after many

hours of peaceful sleep, when, of all times, the nervous system is in quiet and at rest?

The stomach and intestines are very sensitive to any foreign matter within them, as shown by worm fits in man and beast.

Many very curious things have been found within the intestinal tract, such as lizards, snakes, worms, etc.

Not a few people have been cured of epilepsy similar to my case by the release of parasites from the alimentary canal even after many years of trouble.

Many physicians put forth the theory that toxic poisoning is the underlying cause of this disease. Without doubt the accumulation of toxins and other poisons within the alimentary canal produces an increasing irritation which in time nature overcomes only by the most violent convulsions; but these convulsions are not the disease, they are only nature's struggle to overcome the impediments and to settle down again into her ways of peace. Nature never declares war, never fights unless attacked, never subjugates, conquers or destroys. Her ideal is harmony and her policy is always peace and forbearance.

Physicians say toxins are manufactured by microbes. Admitted. Our whole body, though, is a toxin factory; and there is always some toxin to be found in stock or some that is slow in getting out. In all animals in health, toxin is expelled from the body through particular channels which are altogether separate from other parts. These excretory channels in our bodies are the skin, lungs, and kidneys. If, doctor, you accept the statement that nature is always laboring to overcome our enemies, would it not be ridiculous to suppose that nature is manufacturing toxins and then disposing of them for her own destruction? Again I put the question: Does the irritating cause of this disease lie in and as a part of the system, or is it entirely separate? May not these irritating toxins be the product of some part of the body other than the alimentary canal?

Uncinariases in the South.—Conclusions:

1. Uncinariases is one of the commonest diseases in the South (it is believed).
2. It is the chief cause of anemia in children.
3. Adults, if not too badly infected, seem to outgrow it.
4. Ground itch is intimately associated with uncinariases.
5. Infection most probably arises from contamination of the hands and later by swallowing the embryos.
6. Infection, other than through the mouth, is thought to be very improbable.
7. It is impossible to infect man with uncinarias of dogs or of other animals.
8. Prophylaxis.
   (a) Establishment of privies.
      (I.) That can be easily cleaned and disinfected.
      (II.) That are closed below.
      (III.) That are so constructed that the discharges are not scattered over the adjacent soil.
   (b) Children should use only these privies.
9. Treatment:

Thymol and castor-oil. (*American Medicine*, Jan. 9, 1904. Louis M. Warfield, Savannah.)

Liquid air will

1. Produce local anesthesia, because it freezes.
2. Reduce inflammation, whenever cold is indicated. In this case either the vapor or vessels containing the liquid, or liquid air itself can be used depending upon the degree of cold desired.
3. Produce inflammation; therefore local stimulation by producing a perfect localized anemia, which is always followed by congestion.
4. Produce a slough, by causing an obliterating endarteritis and destroy the nerve supply in a growth, by repeated freezings.
5. Produce oxygen, either in liquid or vapor form, and lastly,
6. The use of liquid air has the effect of an antiseptic. Although it does not destroy pure and virulent culture of germs, it aborts their activity for a time and with the assistance of the local congestion of the parts following the use of liquid air, nature more easily overcomes and destroys the germ activity. (*Med. Record*, Jan. 16, 1904. A. Campbell White, New York City.)

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Editor A. P. Biddle, 57 Fort Street West, Detroit, Mich.

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MARCH, 1904

Editorial

THE DEVELOPMENT OF THE BRANCHES IN THE MICHIGAN STATE SOCIETY.

Some officials think that the only practical method of development of State Society Branches consists in "rendering the scientific part of their meetings as good as possible." Certainly this is fundamental —to create and maintain a good market, the salesman must have the best goods for the price, and have them constantly. No society will long prosper that does not regularly furnish the best obtainable papers, discussions, etc.

But in medical societies, as in business, more is needed than the possession of the best goods. The existence of good programmes must be carried to outsiders, by those cognizant of the fact. In short, the officers and members must hunt up new customers and persuade them to invest in the society's goods. No medical society or any other good thing long prospered that did not "make its light shine." Hid under a bushel basket, the best of light is useless; so the best of medical societies is doomed to darkness unless active effort spreads its light into the remotest corners. Make it clear to every doctor that a medical society has rest for the weary, knowledge for those seeking it, help for the perplexed, and good cheer for all, and their presence at regular meetings will be certain.

Unlike its predecessors, the present evolution of the Michigan State Medical Society aims to secure the active co-operation of every doctor within the borders of this State. Those in harmony with its spirit and method, need only to be convinced of its genuine helpfulness, to contribute their personal effort. Others must be approached, made to realize their errors, induced to drop them and persuaded to work in harmony with "the medical profession."

It is clear that this scheme calls for intelligent, sympathetic, persistent work—work by every official in each Branch as well as of the parent society. It calls for similar work from every member of existing Branches. In season and out all of these must seek three things: 1, make the meetings better; 2, tell outsiders thereof and of the sympathetic helpful brotherhood that is being developed and, 3, persuade them to join their Branch and engage in the same beneficent mission.

All this movement is outside of either cliquism or politics; it began and is continued in the spirit of the highest good to all, the greatest to him who sacrifices most for the benefit of his Branch or other Branches. It aims to bring about that condition when both laity and profession can respect every doctor in the State.

It is easy to see that the ways for soonest attaining this object are infinitely varied, according to the personality and conditions surrounding individual doctors and separate Branches.

DR. EDMUND ANDREWS.

Dr. Andrews died January 22, aged eighty, as the result of an operation Jan. 17th for stone in the bladder, plus the feebleness of advanced years. He was born in Vermont, but with his parents removed in the thirties to Michigan. He was a graduate both of the literary and medical departments of the University of Michigan. He was the first Demonstrator of Anatomy in that University, and as such he had charge of securing anatomical material, so breaking the laws of the State. He was the founder and editor of the first medical journal published in Michigan, the *Peninsular Medical Journal.* He was an able, enthusiastic teacher of large abilities and clear cut thought. The history of that early date shows that he possessed large possibilities, and as a resident of Michigan, we regret the attraction which called Dr. Andrews to Chicago.

He was a professor for three years in Rush Medical College, when he joined Dr. N. S. Davis, H. R. Johnston and others in founding the old Chicago Medical College, on the basis of a longer course and graded method of teaching. For forty-eight years as a teacher and a practitioner of surgery, he was a noted figure in the medical life of Chicago. His numerous students, and his many written articles testify to his ability as a teacher and his soundness as a practitioner. As a surgeon during the Civil War he ranked high —as shown by the Medical and Surgical history of the War of the Rebellion.

He was an ardent student in science outside his calling. Thus in 1854 he founded the Chicago Academy of Sciences and was long an active worker therein.

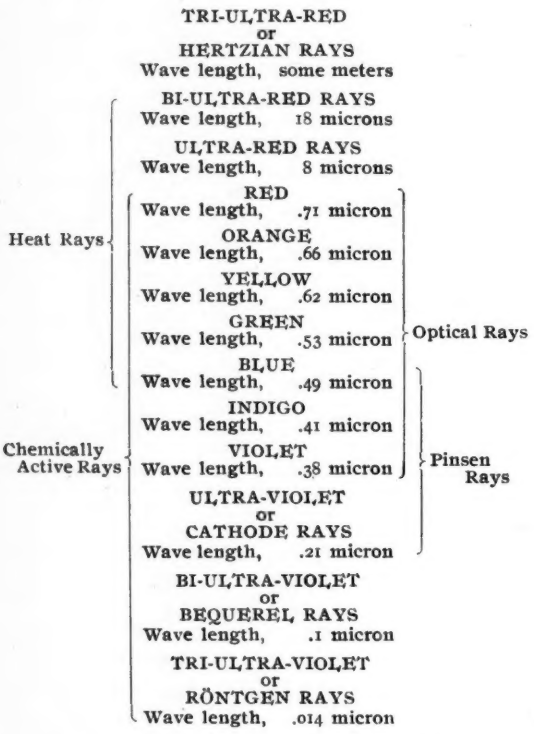
Of large native ability, thorough training, possessing the native talent for a medical career, kindly toward all while adherent to his own thinking, indefatigable to know and do all that was possible, he was such a character as to command both confidence and respect. The medical history of both Michigan and Illinois will exhibit him clearly as among the leading men of his time, in moulding the profession and uplifting the laity.

RÖNTGEN RAY.

In 1895, W. C. Röntgen of Würzburg discovered that a screen of barium-platinocyanide fluoresced when exposed to a Crookes tube which had been covered with cardboard, thus cutting off all the light. He further discovered that even if one placed a book two or three inches thick between this tube and screen, the screen still fluoresced. Pursuing this still further, he found that this cardboard covered Crookes tube had an active influence on a photographic plate. With unusual modesty Röntgen called these invisible rays the "unknown," or X ray.

As to the nature of the ray, Röntgen thought they were due to longitudinal vibrations of ether. In 1883, Weidemann of Leipsic advanced the opinion that the "cathode" rays were light waves of extremely short wave length, far beyond the violet light waves of the spectrum. This theory has been applied as to the nature of the "Röntgen ray," and is the view most generally accepted to-day. Francis LeRoy Satterlee, Jr., of New York Ctiy, devised the appended chart (*Medical Record,* Jan. 16, '04) which gives one a clear yet concise conception of this view.

There has been much discussion during the seven and one-half years since Röntgen discovered the rays which so frequent-



ly bear his name, concerning high and low vacuum tubes. Satterlee in the same article gives some of the main differences between these two variety of tubes.

HIGH-VACUUM TUBES.

One-millionth per cent. vacuum.
Hard tubes.
Small volume of rays.
More penetrating rays.
Giving off more electricity.
Less contrast in radiograph.
Bones white with fluoroscope.
Less danger of dermatitis.

LOW-VACUUM TUBES.

One-thousandth per cent. vacuum.
Soft tubes.
Large volume of rays.
Less penetrating rays.
Giving off less electricity.
More contrast in radiograph.
Bones black with fluoroscope.
More danger of dermatitis.

Of a great deal of interest both to the patient and the physician, is the question of X-ray "burns." These were at first thought to be the result of the electricity given off from the tube. Later another theory was proposed, namely, that the "burn" was due to an irritation of the skin brought about by the minute particles of platinum which were thrown off and imbedded in the tissue. T. C. Gilchrist, of Baltimore, showed that this view was not correct by having a portion of the "burned" tissue examined chemically for traces of platinum with a negative result. Robert Keinbock of Vienna presented the following theory, which is the one most generally accepted today: He found that the so-called X-ray "burns" occurred (1) much more frequently with low-vacuum tubes (which are far more rich in tri-ultra violet rays) than with high-vacuum tubes, and (2) that "burns" could not be produced if the tube was placed so that the target pointed away from the patient. If the "burns" were due to the electricity given off, then "burning" of the tissue would occur with the target pointing in any direction, as the "bulb" is charged equally with electricity on one side of the anode as on the other. But this does not occur.

The practical question in regard to the Röntgen ray is, What can one accomplish with it? There are two ways of using it:

(1) Fluoroscopy—where the fluoroscope is employed and the part examined through it.

(2) Radiography—where photographic plates take the shadow of the object examined. Generally speaking, this latter is the more accurate and satisfactory method.

As an instrument for diagnosis, the ray has been quite extensively used, as in surgical cases to diagnose fractures, tumors, presence of foreign bodies and the

like. Some use has been made of it as a help in diagnosing non-erupted teeth, disease of pulp-canals, etc. As an aid to instruction in physiology and anatomy, the Röntgen ray may become of some assistance to the teacher.

This ray is now being quite thoroughly tried out as a therapeutic agent. In superficial inflammatory diseases, as chronic folliculitis of upper and lower lip, chronic seborrhœic eczema, chronic acne rosacea, chronic acne, most satisfactory results are obtained for the patient (A. P. Biddle, Detroit). Arthur D. Bevan of Chicago writes in regard to carcinoma, that if it is very thin and very superficial, as an epithelioma of face or rodent ulcer which has not as yet involved the tissues beneath the skin, the X-ray treatment will cause it to disappear. If, however, the epithelioma is a thickened mass of new tissue as are epithelioma of lower lip, the results are apt to be unsatisfactory. (*Jour. of Amer. Med. Assoc.*, Jan. 2, '04.) The treatment of a deep seated cancer is also unfavorable as far as a cure goes. A. E. Carrier of Detroit reports a case of mycosis fungoides (*Jour. of Cutan. Diseases with Syphilis*, Feb., '04). The doctor writes: "In a disease so universally fatal as mycosis fungoides, any treatment that even for a time seems to stay the progress of the affection or relieve it of the distressing subjective symptoms, will be heartily welcomed. After a treatment for about three months with the X-ray, there was present no evidence of disease, save the presence of pigmentation in the sites of the larger tumors. Whether the patient is cured or not, it is too early to say, but in this instance it has undoubtedly stayed the progress of the disease."

The tri-ultra violet ray is now being used on a great number and in a widely diversified class of cases. What the outcome will be, it is impossible to say. However, it can be truly said that there are many thousand people, who are apparently perfectly well to-day, who would still have been afflicted with disease and pain, had not the "unknown" ray of Röntgen been discovered.

SECOND CALL FOR PAPERS.

Every member of the State Society desiring to read a paper at the next Annual Meeting of the State Society, May 25th, 26th and 27th, at Grand Rapids, will please send the title of his paper to the Secretary of the Section before which he desires to read the same as soon as possible, not later than March 10th.

NEWS ITEMS.

Dr. Elmer F. Otis, of the medical staff of the Battle Creek Sanitarium, and Dr. Clara L. Beckner, of Boston, Mass., were married Jan. 1, 1904. They will make their home in Battle Creek.

The two factions in New York State have finally united in a common purpose.

The fees of the College of Physicians and Surgeons of New York are raised from $200 to $250 per year. Students who are not candidates for a degree will pay $25 per year for each hour of weekly attendance in various lectures and recitation courses.

January 14th L. E. Maire, of Detroit, was elected a member of the Board of Directors of the Wayne County Medical Society, to fill the vacancy caused by the resignation of A. D. Holmes.

The Ann Arbor Medical Club held a meeting in Ann Arbor Jan. 21st.

The Northeastern District Medical Society of Michigan held its fifty-second annual meeting at Port Huron, Feb. 4th.

COUNCIL OF MICHIGAN STATE MEDICAL SOCIETY.—MINUTES OF MEETING.

The meeting was called to order Jan. 26th, 1904, 1 p. m., in Hotel St. Clair, Detroit, by Chairman Connor. Those present were: Connor, Bulson, Carnes, Welsh, Willson, Small, Landon, Dodge, Felch, Haughey, President Breakey and Secretary Biddle of the State Society.

The report of the editor of the *Journal* was read and adopted. He suggested that as the detail work of the *Journal* had become too great for one person, it be put in the hands of another and that the editor be empowered to appoint, for the next year, a managing editor, subject to his supervision.

As the *Journal* has on hand more material than can be used within its appropriation and this is steadily increasing, he requested that the editors be given full power to decline papers already published and to abstract others when circumstances forbade their entire publication.

The report of the Secretary of the State Society was read and approved.

REPORT OF COMMITTEE ON FINANCE.

Your Financial Committee has examined the reports of the Treasurer and Secretary, compared the vouchers and finds the same correct. Your committee recommends that the Secretary be instructed to procure bids from publishers throughout the state upon printing, binding and mailing the *Journal* and that he be empowered to accept the lowest bid offered, and, if necessary, change the location of the *Journal* office of publication. Respectfully submitted,

W. T. DODGE,
LEARTUS CONNOR,
S. I. SMALL.

Moved by Dr. Haughey that the report and recommendation of the committee on finance be adopted. Carried unanimously.

Your committee, to whom was referred the report of the editor of the *Journal of the Michigan State Medical Society* recommended that the request for a managing editor be granted, and it begs to request that the editor be instructed to decline any paper which has been published in any other journal, and that he abstract or request the author to abstract such papers as in his judgment cannot be published in full. In regard to rates of advertising, etc., his own judgment is better than ours on account of his familiarity with that branch of the business.

We again request the secretaries of county societies to secure suitable advertisements for the *Journal* to the end that we may augment its finances. Signed,

M. WILLSON,
D. EMMETT WELSH.

Moved by Dr. Haughey that this report together with the recommendations be adopted. Supported and carried unanimously.

Dr. Welsh, of Grand Rapids, reported that the work of preparing for the meeting of the State Society in May was progressing very nicely. All committees had been appointed and were doing good work. Much interest prevailed. There would be about forty exhibits, which would be upstairs and by themselves. Headquarters had not yet been decided upon. The first evening would be devoted to an entertainment of some character, while on the second a discourse by some eminent doctor would be given.

He reports his district well organized and that much interest prevails therein.

Dr. Connor suggested that a membership card be presented to every doctor who affiliates, on the back of which is printed the advantages of his membership in the organization. This was referred to the committee on County Societies.

Dr. Dodge of the 11th district reported a well organized district with eight county societies. He visited Muskegon County for Dr. McMullen of the 9th district, and thinks it hardly advisable to try to organize there at present, but desired that Dr. Welsh be authorized to approach the individual men and get them to join the Kent County or one of the adjoining societies. Dr. Dodge was in favor of redistricting the state so as to make it easier for the individual Councilor to make his circuit.

Dr. Willson reported a very harmonious district with one exception, St. Clair County. He suggested that the State Society House of Delegates consider such revision of the Constitution and By-laws so that a majority vote would admit to membership, as some of the counties require a two-thirds vote and some three-fourths of those present. He also considered that the clause that "any member of the society who consulted with these men is subject to expulsion" ought to be eliminated.

Dr. Carnes reported his district in a flourishing condition. There was a little friction in Berrien County.

Dr. Felch reported that at Marquette the plan of having clinics has been adopted. All meet-

ings are followed by lunch after which the evening is passed in social converse enlivened by a visit to the smoking room or bowling alley as the individual desires. This creates good fellowship.

Dr. Bulson of the second district reported that at the annual meeting of the Jackson County Society a clinic was held. They are endeavoring to bring in the younger element of the physicians, and as they come in touch with the work they become interested and join. He is in favor of redistricting the state for the convenience of the Councilor's work.

Dr. Haughey of the third district had received no reports from any of the county societies; however they are all in good working order. He considered that some counties hold too frequent meetings. Quarterly meetings would probably be better attended than monthly ones. He also advised the necessity for all county societies to hold their annual meeting early enough so that they can get their reports in by January first.

Dr. Landon reported the tenth district in a flourishing and prosperous condition with a gain in membership in nearly all the societies.

An intermission was here taken for dinner, after which it was moved by Dr. Willson and supported by Dr. Haughey that Dr. A. P. Biddle be re-elected Secretary-Editor of the society for the ensuing year. Carried unanimously.

Moved by Dr. Haughey, supported by Dr. Bulson, that Dr. Chas. W. Moran be re-elected Treasurer for the ensuing year. Carried unanimously.

Moved by Dr. Haughey that the salary of the Secretary-Editor be the same as it was last year. Supported and carried unanimously.

Moved by Dr. Willson and supported by Dr. Haughey that a vote of thanks be tendered Dr. A. P. Biddle for his earnest, persistent and intelligent labors as Secretary-Editor. Carried unanimously.

Moved that the Chairman of the Council be empowered to formulate membership cards to be given as a receipt for dues to each member and to have printed on the back in as compact form as possible the advantages which his membership brings. Supported and carried.

The Council adjourned to meet at 7:30 p. m., at the Morton House, Grand Rapids, Tuesday, May. 24, the day before the meeting of the State Society.

W. H. HAUGHEY,
Secretary of Council.

County Society News.

DELTA COUNTY.

Delta County Medical Society held its annual meeting at Gladstone, Jan. 21st. The following officers were elected:

President—A. F. Snyder, Escanaba.
Vice-President—Geo. Björkman, Gladstone.
Secretary—H. W. Long, Escanaba.
Treasurer—Wm. Elliott, Escanaba.
Director for three years—A. L. Laing, Rapid River.
Delegate—O. E. Youngquist, Escanaba. Alternate, H. W. Banks, Escanaba.

H. W. LONG, Sec'y.

EATON COUNTY.

Eaton County Medical Society held its second annual meeting at Charlotte, Jan. 28th. The following officers were elected:

President—C. H. Meade, Olivet.
Vice-President—C. A. Stimson, Eaton Rapids.
Secretary-Treasurer—W. H. Rand, Charlotte.
Delegate—G. B. Allen, Charlotte.

The Society now has a membership of 27 physicians.

W. H. RAND, Sec'y.

GRAND TRAVERSE COUNTY.

Grand Traverse County Medical Society held its annual meeting Jan. 8th, at Traverse City. H. B. Anderson was elected President; E. B. Minor, Secretary; A. S. Rosenthal-Thompson, Delegate, and H. B. Garner, Alternate.

E. B. MINOR, Sec'y.

MACOMB COUNTY.

Macomb County Medical Society held its annual meeting in Mt. Clemens, Jan. 28th.

There are 59 physicians registered in this county; 38 are now members of Macomb County Medical Society.

The following officers were elected for the ensuing year:

President—P. A. Knight, Mt. Clemens.
Vice-President—Wm. Greenshields, Romeo.
Secretary-Treasurer—Joseph M. Croman, Mt. Clemens.
Delegate—James Yates, Roseville.
Alternate—H. G. Berry, Mt. Clemens.

The President, P. A. McKnight, made a short address, which was much appreciated by those present.

JOSEPH M. CROMAN, Sec'y.

MONTCALM COUNTY.

The Montcalm County Medical Society held its quarterly meeting Jan. 7th, at Edmore.

F. R. Blanchard, of Lakeview, read a paper on "Typhoid Fever—Differential Diagnosis."

Abstract—

The diagnosis of typhoid fever is not always an easy matter, notwithstanding the fact that the advance of science has brought to our assistance many valuable helps.

The cardinal diagnostic signs are:

(1) The peculiar temperature curve.
(2) Rose spots.
(3) Splenic tumor.
(4) Dicrotic pulse.
(5) Epitaxis (sometimes).
(6) Diarrhoea (sometimes).

To these may be added:

(7) Diazo reaction in the urine.
(8) Widal serum test.

A negative result of (7) and (8), however, does not exclude typhoid.

The paper then takes up the differential diagnosis between those diseases simulating typhoid fever and typhoid fever itself.

In closing the writer dwells strongly on the fact that, owing to the vast importance of prophylactic disinfection, it is best to accept the dictum, that typhoid is to be suspected in every case of continued fever, running over a period of seven days. This is especially so, if the fever resists the action of quinine.

Richard R. Smith, of Grand Rapids, read a paper on "Carcinoma of the Breast." Diagrams showing vividly the operation for excision were presented and were of great interest.

A. W. Nichols, of Greenville, reported several surgical cases.

W. F. Dodge, Councilor for Eleventh District, was present and added much to the interest of the meeting.

L. S. Crotzer, of Edmore, was elected delegate to the State Society, and F. R. Blanchard alternate.

H. L. Bower, Sec'y.

SCHOOLCRAFT COUNTY.

Schoolcraft County Medical Society held its annual meeting in Manistique, Jan. 11th. J. M. Sattler was elected President, and G. M. Livingston, Secretary.

TUSCOLA COUNTY.

Tuscola County Medical Society held its annual meeting Jan. 11th at Vassar.

President A. L. Seeley read his annual address. He dwelt at length upon the status of the Board of Supervisors in relation to Doctors' bills for the treatment of smallpox and other contagious diseases.

The Society authorized the president-elect to appoint a committee to draft resolutions, to be presented to the Board of Supervisors at their next annual meeting, stating fully the position of the physicians of the county in regard to these cases.

S. I. Small, of Saginaw, Councilor for the Eighth District, gave the Society a short talk, complimenting Tuscola County Medical Society on the work already done and stimulating the members to make a still greater effort to get every physician in the county into the County Society.

George Bates, of Kingston, read a paper on "The Physician's Duty to Pregnant Women."

Six members were received at this meeting, making a total of twenty-five who have joined the Society, out of the forty-seven eligible physicians of the county.

The election of officers for the ensuing year resulted as follows:

President—P. J. Livingstone, Caro.
Vice-President—B. D'Arcy, Caro.
Secretary—W. C. Garvin, Millington.
Treasurer—F. D. LeValley, Vassar.
Delegate—A. L. Seeley, Mayville.
Alternate—A. E. Copp, Tuscola.

W. C. Garvin, Sec'y.

VAN BUREN COUNTY.

Van Buren County Medical Society held its annual meeting at Paw Paw Jan. 28th, and elected the following officers:

President—J. C. Maxwell, Paw Paw.
Vice-President—L. Curtis, Paw Paw.
Secretary-Treasurer—N. A. Williams, Bangor.
Delegate—N. A. Williams, Bangor.
Alternate—G. D. Carnes, South Haven.

The retiring president discussed the question of medical organization, pointing out the advantages derived therefrom.

Reuben Petersen, of Ann Arbor, read a paper on "Pelvic Inflammation From the Standpoint of the General Practitioner."

J. E. Maxwell, of Decatur, presented a paper on "Placenta Previa."

Abstract—

A. Definition—Placenta previa is an implantation of the placenta at the lower part of the uterus cavity over the internal os uteri.

B. Pathology—This is taken up briefly by the writer.

C. Etiology—(1) The older writers believed that placenta previa was caused by the slipping down of the ovule from either the upper or middle to the lower zone of the uterus, where a second implantation of the ovule took place. In other words, it was an arrested aborption.

(2) To-day it is believed that the implantation of the ovule in the lower zone of the uterus, the development and growth downward, encroaching on the internal os, is the true cause of placenta previa.

D. Symptoms—The doctor then takes up the classical symptoms and signs of this disease.

E. Prognosis—This is extremely grave both for the mother and for the child. Hofmeir's latest report showed a maternal mortality of one out of every forty-six cases of placenta previa.

F. Treatment—This the doctor handles very nicely. He lays especial stress on saving the life of the mother even if you have to sacrifice that of the child to do so.

G. Report of five cases the writer has had of placenta previa. Mortality to the mothers was 0%, to the children 80%.

N. A. WILLIAMS, Sec'y.

WAYNE COUNTY.

A committee was appointed at the meeting of the Wayne County Medical Society Jan. 21st, to confer with Frederick Stearns & Co., Parke, Davis & Co., and H. K. Mulford & Co., relative to the cause for the change in price and package of diphtheria antitoxin. At the meeting of the Society, Jan. 28th, the committee submitted the following report, which was accepted:

It was the effort on the part of your committee to learn three things:

(1) Why the 500 unit package was discontinued.

(2) Why all the "Standard" or "X" had been withdrawn.

(3) The cause for the change in price.

In regard to (1), we learned that it was the impression of the firms consulted that 500 units did not immunize in all cases. So to simplify matters and to make the immunizing dose safe, the 1000 unit quantity was alone selected for that purpose. Since the withdrawal of the 500 unit quantity was unsatisfactory to the physicians, the 500 unit dose for immunizing purposes has been reinstated, but only in the "Special" or "XX" potency.

In regard to (2) as to why the "Standard" or "X" had been withdrawn, we were told that between 75% and 85% of all the antitoxin used throughout the country was the "Special" or "XX," and that the withdrawal of the "Standard" or "X" was because (a) there was a lack of demand for it and because (b) it was a burden to the patient and physician to inject so large a volume when a large dose was necessary, and because (c) it simplifies matters to have but one grade.

In regard to (3) as to the price, (a) the price of the 500 unit "Standard" or "X" has been such that the production of it has been a loss to the manufacturer and the price of the "Special" or "XX" is but a sufficient advance to meet the loss on this quantity. These were the grounds taken by Frederick Stearns & Co., while Parke, Davis & Co. attributed the advance of price in this package to the injecting apparatus, which now is an additional accompaniment to each package. The net value of this mechanical appliance is about 23 cents. (b) 40% of the total product is returned at the expiration of the time limit, resulting in a total loss for that returned, thereby increasing materially the cost of the output.

Since writing this report, the following letter was received from Frederick Stearns & Co.:

"Agreeable to the suggestion of your committee, we will furnish a low potency antitoxin (such as formerly was listed by us as "Regular" or "X") in two sizes of package, only of 500 and 1000 units respectively. This will be put up in hermetically sealed bulbs (as all our serum was originally) without the injecting device and will be sold at 75 cents for the 500 unit bulb and $1.50 for the 1000 unit bulb. We consider that these two sizes of the low potency serum will be all that is necessary to offer, for at the present reduced prices at which the higher potency serums are selling, the difference in price between the two kinds barely exceeds the cost to us of the syro bulb."

Following will show the relative cost of the "Special" or "XX" this year from last year:

	1904.	1903.
No. 0—Per Syro-bulb of 500 units..	$1.10	$1.15
No. 1— " " " " 1000 " ..	$2.00	$2.25
No. 2— " " " " 2000 " ..	$3.50	$4.00
No. 3— " " " " 3000 " ..	$5.00	$5.75
No. 4— " " " " 4000 " ..	$6.50	.....

Signed

H. WELLINGTON YATES,
J. A. MACMILLAN,
B. R. SHURLY,
Committee.

CHANGE IN MEMBERSHIP.

(Jan. 15th to Feb. 5th.)

NEW MEMBERS.

D. L. Alexander, Ann Arbor, Mich.
F. Allen, Fostoria, Mich.
N. I. Baker, Milford, Mich.
C. N. Bottum, Marquette, Mich.
E. E. Bronson, Ganges, Mich.
W. C. Conley, Ishpeming, Mich.
T. B. Cooley, Ann Arbor, Mich.
A. E. Copp, Tuscola, Mich
T. M. Cunningham, Marquette, Mich.
W. P. Elmer, Ann Arbor, Mich.
R. D. Fox, Ann Arbor, Mich.
G. W. Fralick, Maple City, Mich.
F. J. Gibson, Jackson, Mich.
H. Gilbert, Bay City, Mich.
C. L. Girard, Escanaba, Mich.
M. E. Greene, Charlotte, Mich.
J. O. Groos, Escanaba, Mich.
G. E. Grover, West Bay City, Mich.
A. Gulde, Chelsea, Mich.
J. W. Gustin, Bay City, Mich.
X. A. Jones, Cement City, Mich.
E. D. Kremers, Ann Arbor, Mich.
W. J. Laird, Nahma, Mich.
W. P. Lane, Northland, Mich.
Dr. McHugh, Kenton, Mich.
J. A. McLandress, Bay City, Mich.
J. C. McDonnell, Sanilac Center, Mich.
J. Mackenzie, Reese, Mich.
A. W. Martin, Howard City, Mich.
W. A. Maxfield, Hudsonville, Mich.
E. L. Morrison, Jackson, Mich.
H. L. Morris, Vassar, Mich.
R. Morris, Vassar, Mich.
R. S. Morris, Ann Arbor, Mich.
R. L. Morse, Ann Arbor, Mich.
Andrew Nelson, Manistique, Mich.
A. T. Northcott, Bay City, Mich.
S. Osborn, Ann Arbor, Mich.
P. W. Pearsall, Kalkaska, Mich.
J. C. Peppler, Graafschap, Mich.
E. B. Pierce, Jackson, Mich.
G. R. Pray, Jackson, Mich.
F. H. Randall, W. Bay City, Mich.
A. P. Reed, Ann Arbor, Mich.
J. D Riker, Pontiac, Mich.
J. G. Rulison, Ann Arbor, Mich.
C. S. Sackett, Charlotte, Mich.
T. W. Scholtes, Munising, Mich.
A. G. Sheets, Eaton Rapids, Mich.
W. S. Shipp, Ann Arbor, Mich.
F. L. Smith, Commerce, Mich.
Virginia Smith, Spring Lake, Mich
E. L. Therlby, Traverse City, Mich.
A. E. Unger, Dundee, Mich.
G. Vander Veen, Grand Haven, Mich.
H. S. Wagner, Ann Arbor, Mich.
R. J. Walker, Saugatuck, Mich.
G. W. Walworth, Reese, Mich.

CHANGE OF ADDRESS.

L. Fleckenstein, Swartz Creek, Mich.
G. E. French, Wells.
G. W. Shipman, Rochester, Mich.
W. Taylor, Fairview, Oklahoma Territory.
C. M. Thompson, Traverse City, Mich.

LEFT THE STATE.

H. B. Horton, Laurium, Mich.
W. F. Knapp, Monroe, Mich.

ADDRESS LOST.

F. D. Rich, Manistee, Mich.
C. M. Steele, Bay City, Mich.

DROPPED.

C. A. Clark, Williamsburg, Mich.

The Occurrence of Cells with Eosinophile Granulation.—1. Eosinophile leucocytes, which are identical with those found in the circulating blood, occur in

(a) Mucosa of gastro-intestinal tract.
(b) Mucosa of air passages.
(c) Lymphatic tissue.
(d) Spleen.

2. Large mononuclear cells with eosinophilic granulations occur in the bone marrow.

(a) These undergo mitotic division and
(b) Form daughter cells
(I.) Which resemble in size the eosinophiles of the blood, and
(II.) Whose nuclei are polymorphous.

3. There is no evidence of multiplication of the eosinophiles in the blood or in the various organs.

4. The neutrophilic or amphophilic myelocytes resemble the eosinophilic myelocyte in

(a) Size and
(b) Character of nuclei.

5. An increase in the eosinophiles of the blood is accompanied by an increase, in the bone marrow, of the eosinophilic myelocyte in

(a) Number and
(b) Mitotic divisions.

6. Eosinophiles, manutactured in the bone marrow, reach the tissues through the blood vessels.

7. Eosinophiles have been shown to migrate from the blood vessels into the wall of a small bronchus and hence, through the epithelium, into the lumen.

8. It is not improbable that the number of eosinophiles, discharged into the circulation from the bone marrow, is subject to periodic variations.

9. Complete withdrawal of food is followed by a decrease in the proporation and in the absolute number of eosinophiles in the peripheral circulation.

10. This diminution is proceeded by a temporary increase, which may be explained by

supposing that the ripe eosinophiles already stored in the marrow, reaching the circulation, are no longer diverted to the intestinal mucosa.

11. With the administration of food, the eosinophiles of the blood gradually increase in number, but neither the weight of the animal nor the number of eosinophiles increase continually.

12. There exists a close relationship between the nutrition of the animal and the eosinophilic leucocyte as is shown by the fact that variations in weight and in the number of these cells take place with much regularity, but in opposite directions, so that a temporary fall in weight is accompanied by a rapid increase of the eosinophiles, while a rise in weight tends to retard this increase. *American Journal of the Medical Sciences,* Feb., 1904; Eugene Opie.)

The X-ray as a Therapeutic Agent with Especial Reference to Carcinoma.—1. Value of X-ray treatment in carcinomata depends on three factors:

(I.) The situation of the lesion, whether superficial or deeply situated. The destructive action of the X-ray on cancer cells is in direct proportion to their superficial position.

(II.) The rapidity of the growth and the resisting power of the carcinoma cells in the particular case.

(III.) Size of the new growth.

2. The X-ray is indicated as a therapeutic agent:

(I.) In superficial epitheliomas.

(II.) As a post-operative treatment in most of our carcinoma cases.

(III.) In our inoperable cases, as a justifiable piece of experimental work in the hope, that this line of investigation may possibly lead to valuable results.

3. The dangers of the X-ray:

(I.) Possibility of producing a serious X-ray burn.

(II.) The use of the X-ray in cases where it should not be used; where its use is of no benefit to the patient; where its use means valuable time is lost, thus preventing the patient from receiving greater chances of cure offered by surgical intervention. (*Journal of the American Medical Association,* Jan. 2, 1904. Arthur D. Bevan, Chicago.

Book Notices.

PRACTICAL DIETETICS WITH SPECIAL REFERENCE TO DIET IN DISEASE. W. Gilman Thompson, M.D. Second Edition. Cloth, pp. 828. D. Appleton & Co., New York.

This book is a thorough revision of the first edition, which appeared about seven years previously. Considerable new material has been added and the old brought up to date. The need for such a book is apparent to all. The best text books of medicine bristle with such statements as "The value of nutritious diet requires mere mention;" "General dietetic treatment is of primary importance," etc. It is to reduce this general dietetic treatment to something concrete and practical that this book has been written.

Much emphasis has been laid in medical teaching on the importance of right diet in preserving health. How much more attention should, then, be given to this subject for those, whose powers of assimilation are weakened or broken down by disease? In many cases, all are willing to concede, that the question of nourishment is the all important one, and yet the details of this part of the treatment, are too often left to the friends or nurse in charge of the case, aided, or hindered, as the case may be, by the patient's own desires. It is to fill this gap in our teaching and practice, that this work has been gotten out. As no one man's experience could possibly cover so broad a field, the views of other well known clinicians, are given in addition to those of the author.

The raw materials of our diet are first considered and food and food preparations gone over. The relative values and importance of water, salts, proteids, carbohydrates and fats are considered in detail. Then stimulants, beverages and condiments are discussed, giving, of course, the lion's share to the all important question of alcohol. As the preparation of the food often changes radically its character, this is gone into as well as the methods of food preservation. The digestion of the food and those conditions which especially affect this, such as the hours of eating, mental emotions, etc., are next touched on.

The diseases of the various organic systems of the body, as far as they are influenced by diet, are taken up one by one and treated at great length and with considerable detail. The book is intended chiefly for reference and contains a large amount of very valuable and, at the same time, practical knowledge.

In closing, army and institutional rations are given and various dietaries suitable for all sorts and conditions of men, both in hospitals and elsewhere. The excellent researches upon the value of foods conducted by our Government and published under the auspices of the Department of Agriculture are very fully drawn upon in the preparation of this work. The presswork is excellent and the illustrations are good, although few and taken almost without exception from Bulletin No. 13, Division of Chemistry, Agricultural Bureau. R. C.

Progress of Medical Science.

MEDICINE.

Under the charge of

HARRISON D. JENKS.

Typhoid Fever in Children: This disease has been regarded as rare until recently; still there has been frequent mention of it in the early works, and Loeschner, in 1845, believed it occurred even in sucklings. Yet few cases have been reported under one year; more between one and six, but the majority of cases apparently occur between six and twelve. Boys seem more susceptible than girls.

More pronounced degenerative and necrotic processes in the intestines take place in children while the hypoplastic processes are characteristic of the adult type.

Montmollin's studies show, that, from the first to the tenth year, the duration of the disease gradually increases; in the first year, it is about twelve days; in the fifth year, about fifteen days; in the eighth year, eighteen days, and in the tenth year, twenty days. While the fever is milder in children, the results are fully as serious as in adults. The temperature rarely falls by lysis but commonly by crisis, at the end of the second week.

The respiratory organs are always affected; bronchitis is constant and atelectasis and catarrhal pneumonia in the severer forms.

Treatment is much the same as in adults except that children cannot stand very cold baths. The respiratory organs need especial attention as well as the delirium. For the latter chloral is best. Bromides are valueless.—(*Boston Medical and Surgical Journal,* Dec. 31, '03, and Jan. 7, '04. Adolf Baginsky).

Etiology of Sleeping Sickness: Report of the committee of the Royal Society sent to Uganda to study the disease, consisting of Lt.-Col. Bruce, Dr. Nabarro and Capt. Grieg.

1. That sleeping sickness is caused by the entrance into the blood and cerebrospinal fluid of a species of trypanosoma.

2. That this species is probably that discovered by Forde and described by Dutton from the west coast of Africa and called by him Trypanosoma Gambiense.

3. That cases of trypanosoma fever are probably cases of sleeping sickness in the earliest stages.

* * * * * * * * * *

6. That the trypanosomes are transmitted from the sick to the healthy by a species of tsetse fly, glossina palpalis, and by it alone.

7. That the distribution of sleeping sickness and glossina palpalis correspond.

8. That sleeping sickness is in short a human tsetse fly disease.—(*London Lancet,* Dec. 19, 1903.)

Pure Carbolic Acid in Smallpox: Neech and Hodgson, of Halifax, have treated 136 cases of smallpox with pure carbolic acid, painted on the vesicles and have had a mortality of 3.6%. The acid was painted with a brush on the vesicles, over a limited area, every day, until all were gone over. This was continued until the pustules had dried up. They found that ulceration was prevented, the odor did not appear, and there was no absorption of septic material into the system. Scabs formed in from five to ten days. Patients were discharged well a week or ten days earlier than when no carbolic acid was used.—(*London Lancet,* Dec. 26th, 1903.)

Rheumatism and its Etiology: J. E. Winters in an interesting article in the *New York Medical Record* for Jan. 9, 1904, discusses the etiology of rheumatism. The characteristics of rheumatism are the copious, acid perspiration, acid saliva, hyperacid urine and acid fæces. Since cell processes are dependent on alkalinity this acid condition draws upon the sodium and potassium compounds in the blood and sets free carbonic acid, and this carbonic acid in the blood prevents oxidation. This prevention of oxidation causes the pain in joints, muscles, and tendons, the rheumatic anæmia, and the fever. If then this chemical etiology is right, rheumatism can be prevented by stopping the deficiency in the basic constituents (sodium and potassium) and in the vegetable acids in the food. Hence to reach the tissues and tissue fluids these potassium and sodium compounds must be in organic combination as produced by nature. We should use rich potassium-containing foods and fruits charged with vegetable acids for the diathesis. Rheumatism in childhood is often masked and organic heart disease has developed before we are aware that there was any rheumatism present. The predominating potassium salt in muscle is phosphate of potash, consequently in growing muscles there is an enormous demand upon it, in the rheumatic condition an even greater demand. It is therefore essential in attempting to control the rheumatic manifestations in children to pay attention to the digestive organs and the diet. The diet should contain a large proportion of cereal food, the cereals, vegetable soups, baked potatoes, bread, green vegetables, and fruit.

SURGERY.

Under the charge of

MAX BALLIN.

Hernia: John B. Deaver, in an address before the New York State Association of Railway Surgeons, gives his conclusions, to which a large number of hernia cases have led him. The opinion of such an eminent surgeon is worth quoting on so important a question, when to operate in hernia.

1. REDUCIBLE HERNIA: Deaver does not think, that any patient should wear a truss, but should be operated upon unless contraindicated. The few contraindications to the radical operation are: (a) Age, under 4 years, where about two-fifths of the hernias are cured spontaneously. (b) Organic lesions of heart, lungs or kidney, great obesity with adhesions in the hernia. (c) Old age, above 60 years, if the truss holds the hernia in place.

2. Irreducible hernia is always to be considered a dangerous condition.

3. In strangulated hernia taxis should never be prolonged for more than five minutes, and should be done without anesthesia, unless the failure of such manipulation can be immediately followed by herniotomy. Failing to reduce a hernia by the aid of moist heat and a few intelligently applied efforts at taxis, herniotomy should always be resorted to. The common practice of exhausting hot baths or continuous application of ice-bag are to be condemned.

The radical cure of hernia, non-strangulated, is an operation attended by but little risk to life in skilled hands. Coley reports 1075 cases of herniotomy with two deaths or less than 1-5 of one per cent. On the other hand strangulated hernia gives a mortality of 20%.

Umbilical hernia, if congenital, is best treated by the use of a truss, until the child has reached the 13th or 14th year, when a radical operation can be performed if the hernia has not been cured.

Acquired umbilical hernia is most common in obese persons, who are poor subjects for operation. Strangulation in these cases has a mortality of from 30 to 50%, hence radical operation should not be delayed, if the hernia is not held by a truss.

Hernias of linea alba above the umbilicus are frequently confused with subperitoneal lipoma. The symptoms are vague gastric disturbances and pains, often simulating gall-stone disease. Radical operation and the excision of the subperitoneal lipoma, if present, have often put an end to an extremely painful condition.

Incisional hernia in laparatomy wounds rarely becomes strangulated, unless adhesions have formed.—(*American Medicine*, Dec 12, 1903, J. B. Deavor.)

Appendicitis: Villaret believes that appendicitis does not occur more frequently now than in former years, but thinks that the apparent increase in number of cases is based upon better knowledge in diagnosis. He shows by the annual medical reports of the German army, that at the same rate, as the cases of appendicitis increased, the cases of liver and stomach-catarrhs and of peritonitis decreased. For instance, the

Annual Report of	Shows in Number of Soldiers	Cases of Appendicitis	Cases of Diseases of Liver	Cases of Inflammation of Bowels	Cases of Intestinal Catarrhs, Colics, etc.
1873-4	298.875	156	85	123	1072
1900-1	528.489	918	57	62	379

During these 27 years, 1873-1901, appendicitis increased 70%, diseases of the liver decreased 64.2%, inflammation of the bowels decreased 70.2%, chronic intestinal catarrh, etc., decreased 79.9%. This report shows beyond doubt that the increase in cases of appendicitis is only a consequence of better diagnosis.—(*Deutsche Medicinische Wochenschrift* 1904, No. 1, Villaret.)

Banti's Diseases-Splenectomy.—

1. Etiology is obscure.
2. Splenic tumor.
   (a) Atrophy of splenic pulp.
   (b) Sclerosis of malpighian corpuscles.
   (c) Hypertrophy of capsule and reticulum.
3. Cirrhosis of the liver.
   Lænnec type.
4. Anemia of a progressively fatal type.
5. Hæmoglobin-reduced in amount.
6. Red blood cells and leucocytes-reduced in number.
7. Examination of the blood and spleen, negative for micro-organisms.
8. Radical cure follows removal of the spleen. —(*Revue de Chirurgie*, Oct., 1903, Queen and Duval).

Gastroenterostomy.—

1. Operations—The doctor favors:
   (a) Posterior method of anastomosis or
   (b) Roux or Y operation.
2. Vomiting after operation.
   (a) Cause. The writer believes that the formation of adhesions plays the chief part, by inhibition of the normal peristalsis and the retention of bile and pancreatic secretion in the loop of the afferent limb of the jejunum.
   (b) Treatment.
      (i) Gastric lavage.
      (ii) No food by the mouth.
      (iii) If the above is not successful, a second operation is done.—(*The American Journal of the Medical Sciences*, Feb., 1904, J. B. Deaver).

GYNECOLOGY AND OBSTETRICS

Under the charge of

B. R. SCHENCK.

Antistreptococcus Serum: The different methods of preparing antistreptococcus serum were cited in this column last month. Tavel in a recent paper writes of the results obtained by using the third variety—i.e., that made from several species of unchanged streptococci—on a series of cases of streptococcus infection. Several cases are given in detail, in one of which the symptoms returned after cessation of the injections, again to subside when the treatment was resumed.

Tavel believes that this serum, prepared without passing the organisms through animals, is a *specific* against the streptococcus, and that the failures to cure in all cases are to be explained by our ignorance of the proper dosage and because of the fact that the serum does not contain complements sufficient for the severe cases. —(*Deutsch. Med. Wochenschr.* XXIX. No. 51.)

Importance of the Leucocytes in Gynecology: Waldstein and Fellner have studied the blood in gynecologic affections, with the motive of ascertaining the value of the leucocyte count as an aid in diagnosis. While their observations include but 33 cases, these were carefully studied and the results are given in detail.

In tumors of the adnexa, they found that those containing pus produce, while acute, a leucocytosis; that this increase continues longer than the fever, but finally disappears despite the presence of the pus; that tumors containing no pus produce no change in the number of the white cells.

One patient with ovarian cyst and carcinoma of the uterus showed no leucocytosis, while the blood of one with general carcinosis contained 20,000 per c. mm. This increase they believe to have been due to absorption of the products thrown off by the neoplasm.

The counts in cases of hemorrhage were most interesting. When large quantities of blood have been rapidly lost, as in ruptured extra-uterine pregnancy, the white cells may be increased as much as in pus cases. In one the count was 24,000, falling to 23,000 an hour after operation, and to 16,000 within a few days. When, on the contrary, the bleeding takes place gradually, as in most cases of myoma, the blood forming organs have the opportunity of producing more blood and no leucocytosis results.—(*Wiener klin. Wochenschr.* 1903, No. 28.)

After Results of Placenta Praevia: Radtke introduces his monograph by saying that the literature on placenta prævia is almost wholly given up to diagnosis and treatment and that little has been written on the after effects of the condition. Eighty cases from the records of the Frauenklinic in Königsberg are reviewed. Radtke found that 30% of those married, remained sterile, the sterility being due to serious pathological changes. When pregnancy recurs there is a tendency to abortion. Twenty-three of these 80 cases having subsequently miscarried, eight of them repeatedly. Even after a considerable period had elapsed 75% of the cases suffered from vertigo, dizziness and headaches, and over 60% were incapacitated for work on account of anæmia.

The writer makes a plea for the more careful treatment of such patients, first by correcting pelvic disorders and then by suitable medication.—(*Zentralbl. f. Gyn.* 1903, No. 51.)

Post-operative Thrombosis: Some new statistics on post-operative thrombosis and embolism are given by Albanus, who cites the 53 cases which occurred in 1,140 cœliotomies at the Hamburg hospital. This percentage (4.64) is the largest yet reported. In 26 of the 53 cases the operation was for the removal of tumors; in 18 there was some suppurative process; 10 cases followed appendectomy. Nearly half of the cases (23) were followed by embolism and 10 of these patients died.

A majority of the patients were women and most between the ages of 30 and 40. No new light on the etiology of this condition is given in this paper.—(*Beiträge z. klin. Chir.* XL. No. 2.)

Post-partum Hemorrhage: Prof. Fritsch of Bonn advocates a new method of controlling the bleeding in cases of severe post-partum hemorrhage. All manipulations should be extra vaginal, as infection readily takes place when there is severe secondary anæmia and lacerated tissue.

By this method, pressure is exerted on the uterus by pushing it upward and forward above and in front of the symphysis pubis. After kneading it thoroughly, towels and cloths are packed behind the uterus (invaginating the relaxed abdominal wall) and these are held in place by means of a roller bandage passed around the patient. Such a procedure has given excellent results in the hands of Fritsch and his assistants.—(*Deutsch. med. Wochensch.* XXX. No. 1.)

Hemorrhoid Operation: Landström has been lately operating on hemorrhoids by his new forceps, a small crushing instrument, the force for which is applied by means of a thumb screw. The crushing and cutting away of the pile-bearing mucous membrane can be done very quickly and under primary anæsthesia. In the author's experience of 25 cases, there was practically no suffering after the operation and the results were excellent.—(*Cent. f. Chir.* 1903, No. 47.)